

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AND THE UNITED STATES DEPARTMENT OF JUSTICE

IN THE MATTER OF:)
LOWER DUWAMISH WATERWAY)
SUPERFUND SITE, SEATTLE, WA)
)
)
)
)
SETTLEMENT AGREEMENT AND)
ORDER ON CONSENT FOR REMOVAL)
ACTION BY BONA FIDE PROSPECTIVE)
PURCHASER UNDER THE)
COMPREHENSIVE ENVIRONMENTAL)
RESPONSE, COMPENSATION AND)
LIABILITY ACT, 42 U.S.C. §§ 9601-9675)

In re: STAR FORGE, LLC

**SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR
REMOVAL ACTION BY
BONA FIDE PROSPECTIVE PURCHASER**

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I. INTRODUCTION

1. This Settlement Agreement and Order on Consent for Removal Action by Bona Fide Prospective Purchaser ("Settlement Agreement") is voluntarily entered into by and between the United States, on behalf of the Environmental Protection Agency ("EPA"), and Star Forge, LLC ("Purchaser"). As described in this Settlement Agreement, Purchaser agrees to perform a removal action (the "Work") at or in connection with the property located at 8531 East Marginal Way South in Seattle, WA (the "Property"), which is located in and part of the "Lower Duwamish Waterway Superfund Site" or the "Site," and to pay \$500,000 to an escrow account.

II. JURISDICTION AND GENERAL PROVISIONS

2. This Settlement Agreement is issued pursuant to the authority of the Attorney General to compromise and settle claims of the United States, and the authority vested in the President of the United States by the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. §§ 9601 – 9675, and delegated to the Administrator of EPA by Executive Order No. 12580, January 23, 1987, 52 *Federal Register* 2923.

3. The Parties agree that the United States District Court for the Western District of Washington will have jurisdiction pursuant to Section 113(b) of CERCLA, 42 U.S.C. § 9613(b), for any enforcement action brought with respect to this Settlement Agreement.

4. EPA has notified the State of Washington (the "State") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

5. In addition to and separate from this Settlement Agreement, the Purchaser has represented that it will ensure performance of a remedial investigation and feasibility study and implementation of a Cleanup Action Plan under the oversight of the Washington State Department of Ecology pursuant to the Model Toxics Control Act Chapter 70.105 RCW. The MTCA investigation and cleanup work addresses contamination on areas of the Property not subject to an EPA issued administrative order.

6. Purchaser represents that it is a bona fide prospective purchaser ("BFPP") as defined by Section 101(40) of CERCLA, 42 U.S.C. § 9601(40), that it has and will continue to comply with Section 101(40) during its ownership of the Property, and thus qualifies for the protection from liability under CERCLA set forth in Section 107(r)(1) of CERCLA, 42 U.S.C. § 9607(r)(1), with respect to the Property. In view, however, of the complex nature and significant extent of the work to be performed in connection with the response actions at the Property and the Site, and the risk of claims under CERCLA being asserted against Purchaser notwithstanding Section 107(r)(1) as a consequence of Purchaser's activities at the Site pursuant to this Settlement Agreement, one of the purposes of this Settlement Agreement is to resolve, subject to the reservations and limitations contained in Section XV ("Reservations of Rights by United States"), any potential liability of Purchaser under CERCLA for the Existing Contamination as defined by Paragraph 11 below.

7. The resolution of this potential liability, in exchange for Purchaser's performance of the Work and payment of \$500,000 is in the public interest.

8. The United States and Purchaser recognize that this Settlement Agreement has been negotiated in good faith. Purchaser agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

III. PARTIES BOUND

9. This Settlement Agreement applies to and is binding upon the United States and upon Purchaser and its successors and assigns. Any change in ownership or corporate status of Purchaser including, but not limited to, any transfer of assets or real or personal property shall not alter Purchaser's responsibilities under this Settlement Agreement.

10. Purchaser shall ensure that its contractors, subcontractors, and representatives comply with this Settlement Agreement, and, where appropriate, receive a copy of this Settlement Agreement. Purchaser shall be responsible for any noncompliance with this Settlement Agreement.

IV. DEFINITIONS

11. Unless otherwise expressly provided herein, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations, including any amendments thereto.

"BFPP" shall mean a bona fide prospective purchaser as described in Section 101(40) of CERCLA, 42 U.S.C. § 9601(40).

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675.

"Day" or "day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.

"Effective Date" shall mean the effective date of this Settlement Agreement as provided in Section XXIII.

"EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

"EPA Hazardous Substance Superfund" shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

"Existing Contamination" shall mean:

a. any hazardous substances, pollutants or contaminants present or existing on or under the Property as of the Effective Date;

b. any hazardous substances, pollutants or contaminants that migrated from the Property prior to the Effective Date; and

c. any hazardous substances, pollutants or contaminants presently at the Site that migrate onto or under or from the Property after the Effective Date.

“Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at <http://www2.epa.gov/superfund/superfund-interest-rates>.

“National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

“OSC” shall mean the On-Scene Coordinator as defined in 40 C.F.R. § 300.5.

“Paragraph” shall mean a portion of this Settlement Agreement identified by an Arabic numeral or an upper or lower case letter.

“Parties” shall mean the United States and Purchaser.

“Property” shall mean that portion of the Site located at 8531 East Marginal Way South, Seattle, WA, and encompassing approximately 22 acres, which is described in Attachment A of this Settlement Agreement.

“Purchaser” shall mean Star Forge, LLC.

“Section” shall mean a portion of this Settlement Agreement identified by a Roman numeral.

“Settlement Agreement” shall mean this Settlement Agreement and Order on Consent for Removal Action by Bona Fide Prospective Purchaser and all appendices attached hereto (listed in Section XXI). In the event of conflict between this Settlement Agreement and any Attachment, this Settlement Agreement shall control.

“RCRA” shall mean the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992 (also known as the Resource Conservation and Recovery Act).

“Site” shall mean the Lower Duwamish Waterway Superfund Site encompassing approximately 441 acres of intertidal and subtidal habitats along approximately five river miles on the northern portion of the Duwamish River between the Norfolk Combined Sewer Overflow/Storm Drain and the southern tip of Harbor Island, located in Seattle, WA, and depicted generally on the map attached as Attachment B. The Site shall include the Property, and all areas to which hazardous substances and/or pollutants or contaminants have been deposited, stored, disposed of, placed, or otherwise come to be located.

“State” shall mean the State of Washington.

“United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

“Waste Material” shall mean (a) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any “hazardous substance” under the Model Toxics Control Act Chapter 70.105D RCW.

“Work” shall mean all activities and obligations Purchaser is required to perform under this Settlement Agreement except those required by Section XI (Record Retention, Documentation and Availability of Information).

V. FINDINGS OF FACT

a. The Purchaser is Star Forge, LLC.

b. The Property is currently owned by the Jorgensen Forge Corporation (“Jorgensen”). Constellation Enterprises LLC (“Constellation”), Jorgensen’s parent company, filed Chapter 11 bankruptcy petitions for itself, Jorgensen and other related entities on May 16, 2016 and May 17, 2016. The petitions were filed in the United States Bankruptcy Court for the District of Delaware.

c. On July 14, 2016 Constellation and its related debtors, including Jorgensen, entered into an Asset Purchase Agreement (“APA”) with CE Star Holdings, LLC, a Delaware limited liability Company (“CE Star”). Consummation of CE Star’s purchase of the Property by its designated Purchaser was conditioned on, among other things, reaching agreement with the United States regarding potential environmental liabilities arising from the purchase of the Property.

d. On August 9, 2016, Constellation conducted an auction to sell the Constellation assets, including the Jorgensen assets. CE Star bid approximately \$95 million, comprised of a credit bid of \$60 million and cash payments and assumptions of liabilities of approximately \$35 million, for the Constellation assets, including the Jorgensen assets (the “Stalking Horse bid”). No higher bids were received for the assets.

e. Pursuant to Bankruptcy Code Section 363, the Delaware Bankruptcy Court issued an Order approving the sale of Jorgensen to CE Star’s designated Purchaser on August 19, 2016. However, the actual sale has not yet occurred, and the Court’s Order recognizes that CE Star will not consummate the sale unless it resolves its prospective environmental liabilities.

f. The Property is located at 8531 East Marginal Way South and encompasses approximately 22 acres along the east bank of the Lower Duwamish Waterway Superfund Site. The Property and the Lower Duwamish Site are located within an industrial corridor which includes residential communities and an environmental justice community.

g. Metal forging operations have been conducted by several entities on the Property since 1942. Jorgensen began its operations in 1992 when it purchased the Property. Jorgensen manufactures highly engineered, specialty alloy, open die forgings from high value titanium, aluminum, and steel alloy materials. There is little open space /undeveloped land on the property. The majority of the land is covered by impermeable surfaces like asphalt, concrete paving, and buildings. Loose gravel covers portions of the property. A large portion of the Property rests atop fill. The fill was placed on a bay that fronted the Duwamish River sometime in the 1930s or 1940s to facilitate development of the property.

h. Jorgensen employs 111 metal workers. Purchaser will continue the Jorgensen operations which would otherwise cease absent the purchase of Jorgensen's assets by the Purchaser.

i. EPA issued a Record of Decision (ROD) for the waterway portion of the Site in November of 2014. The ROD is based on the information developed by the remedial investigation/feasibility study (RI/FS) of the waterway. The RI/FS did not investigate the nature and extent of upland contamination. However, EPA selected response actions for the Property in action memoranda and modifications to one of the action memoranda, and in other decision documents.

j. The Lower Duwamish Waterway Site RI/FS identified the nature and extent of contamination within the waterway as well as the risks to human health and the environment presented by the contamination in the waterway. It also evaluated cleanup alternatives to address the contamination. The RI/FS identified many chemical contaminants in the waterway sediment, fish, and shellfish. The risks to human health are posed by four primary contaminants: polychlorinated biphenyls (PCBs), arsenic, polycyclic aromatic hydrocarbons (PAHs), dioxins and furans. The ROD identified cleanup standards for each of the four primary human health risk drivers as well as several other contaminants of concern including but not limited to, mercury, zinc, copper, lead, and, phthalates. The ROD selected four principal types of remedial action – dredging contaminated sediments, partial dredging and capping contaminated sediments, enhanced natural recovery, and monitored natural recovery. The ROD estimates that 960,000 cubic yards of contaminated sediment will be dredged, 105 acres of contaminated sediments will be capped by 3 to 4 feet of clean materials, 48 acres will be enhanced by the placement of a thin layer of clean sand (enhanced natural recovery), and 235 acres will be monitored for natural recovery. The ROD estimates that the net present value of implementing the selected remedy is approximately \$342,233,932.

k. Environmental investigations performed by EPA, Ecology, and other parties revealed high levels of hazardous substances at and near the Jorgensen facility. For example, field sampling found PCBs in soil, bank fill, and stormwater catch basins on the property as well as in intertidal sediments on and adjacent to the property at levels higher than Washington State's sediment quality standards -- as high as 37,000 parts per million (ppm). In addition, high levels of arsenic, lead, copper, mercury, chromium, silver, zinc, and cadmium were found in samples taken on the property and in adjacent sediments above regulatory levels. Dioxins and furans of 6,080 ppm were found in a sediment sample adjacent to the property. PAHs were also found in adjacent sediments at levels between 17,000 to 50,000 parts per billion (ppb). Groundwater beneath the property is contaminated with petroleum products.

l. EPA selected response actions to address the contaminated in-water and embankment area sediments in a July 29, 2011 Action Memorandum. This action has been and is being performed by the Earle M. Jorgensen Company ("EMJ"), the entity that owned the Property prior to Jorgensen, pursuant to an Administrative Settlement Agreement and Order on Consent with EPA. The work includes the removal of contaminated embankment and inter-tidal sediment, followed by the placement of clean fill material in the dredged areas. Portions of the subject cleanup area are on the Property. Most but not all of the cleanup work required by the 2011 Action Memorandum was completed in 2014 and EPA anticipates remaining work will be completed during 2017.

m. EPA selected response actions for the Property in a September 30, 2010 Action Memorandum, and a March 17, 2015 Action Memorandum Amendment (as corrected by the June 24, 2015 Memorandum re Corrections to the Amendment to the Action Memorandum). Both the Action Memorandum and the Action Memorandum Amendment include determinations by EPA that actual or threatened releases of hazardous substances on the Property, if not addressed by implementing the selected response actions, may present an imminent and substantial endangerment to public health, welfare, or the environment. The Boeing Company and Jorgensen are required to implement the selected response actions pursuant to an Administrative Order on Consent. The initial Action Memorandum required the in situ cleaning and closure of a 15 inch and 25 inch public lateral sewage discharge property line storm drains to prevent the PCBs and other hazardous substances from discharging into the waterway. The two pipes are constructed of concrete except for the last 100 feet of the 25 inch pipe which is corrugated metal. The two storm drains received and conveyed stormwater from the Jorgensen property, the Boeing Plant 2 facility, East Marginal Way South, and the King County Airport (aka the "Boeing Field"). The two storm drains collected and conveyed contaminated stormwater to the waterway. Sediment samples collected from the 25 inch pipe in 2005 contained up to 10,000 ppm PCBs. The 2010 Action Memorandum effectively selected plugging the pipes. It did not select removal of the pipes and excavation of surrounding contaminated soils. Post-2010 removal sampling revealed that soils near the corrugated metal portion of the 25 inch pipe contained PCB at levels up to 150 ppm, and provided enough information to select additional response actions in an Amended Action Memorandum. The Amendment selects removal of the corrugated metal pipe, and surrounding soils that contain greater than 1 ppm PCBs. Boeing and Jorgensen are required to perform the removal action pursuant to the Administrative Order on Consent referenced in Paragraph 14, below. EPA estimates that it will cost approximately \$1.9 million to implement the work selected in the Amended Action Memorandum.

n. The Washington Department of Ecology has been overseeing the performance of a Model Toxics Control Act RI/FS on the Property. Jorgensen has been performing this work. The MTCA RI/FS addresses areas of the Property that do not include the areas where EPA has overseen cleanup work. The United States understands that the Purchaser will assume or ensure performance of the MTCA work pursuant to a separate settlement agreement, including the RI/FS and any clean up action selected by Ecology for the Property.

VI. DETERMINATIONS

12. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA has determined that:

a. The Property is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Property, as identified in the Findings of Fact above, include "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Purchaser is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. The conditions described in Paragraphs j-m of the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

e. The Work is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be considered consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VII. SETTLEMENT AGREEMENT

13. In consideration of and in exchange for the United States' Covenant Not to Sue in Section XIV Purchaser agrees to comply with all provisions of this Settlement Agreement, including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VIII. WORK TO BE PERFORMED

14. Purchaser shall perform, at a minimum all actions necessary to implement the response action required by and pursuant to the terms of the Administrative Order on Consent entitled *In the Matter of: Jorgensen Forge Outfall Site, the Boeing Company and Jorgensen Forge Corporation, Respondents*, Administrative Order on Consent for Removal Action, U.S. EPA Region 10, CERCLA Docket No. 10-2001-0017 (12/01/2010) as amended (the "Jorgensen Forge Outfall AOC") (Attachment C and incorporated by reference herein); the March 17, 2015 Amendment to the Action Memorandum for the Removal Action at the Jorgensen Forge Outfall Site, Lower Duwamish Waterway Superfund Site, Seattle, King County, Washington as corrected on June 24, 2015 (Attachment D and incorporated by reference); the Third Modification to the Administrative Order on Consent for the Removal Action, CERCLA Docket No. 10-2011-0017 (03/08/2016) (Attachment E and incorporated by reference); and the EPA letter extending the date for commencing the work required by the Third Amendment to the Jorgensen Forge Outfall AOC (Attachment F and incorporated by reference). In addition, the Purchaser shall assume all Jorgensen Forge Outfall obligations of the Jorgensen Forge Corp but shall not be subject to the Conclusions of Law and Determinations made in Paragraph 10.d of the Jorgensen Forge Outfall AOC. The actions to be implemented generally include, but are not limited to, the following:

the removal of the corrugated metal pipe and surrounding soils containing greater than 1 ppm PCBs and off-Property disposal of the removed wastes.

15. Purchaser shall perform all actions required by this Settlement Agreement in accordance with all applicable local, state, and federal laws and regulations, except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws.

IX. PAYMENT

16. Within thirty (30) days of the Effective Date of this Settlement Agreement, and subject to the approval of the United States, the Purchaser shall establish an interest-bearing account entitled the Lower Duwamish Waterway Jorgensen Forge Property Escrow Account in a form substantially similar to the Escrow Agreement attached to this Settlement Agreement and pay \$500,000 to such Escrow Account. The escrowed funds shall be disbursed, in accordance with the instructions contained in the Escrow Agreement, except as described below, to parties who have entered into a settlement with EPA on or before June 1, 2020 to perform remedial design and/or remedial action for the Lower Duwamish Waterway Site. The Lower Duwamish Waterway Jorgensen Forge Property Escrow Account may not retain any funds after September 1, 2021 and any funds remaining in the Account at that date shall be disbursed as directed by the United States Department of Justice.

X. ACCESS/NOTICE TO SUCCESSORS/INSTITUTIONAL CONTROLS

17. Purchaser agrees to provide EPA, its authorized officers, employees, representatives, and all other persons performing response actions under EPA oversight, an irrevocable right of access at all reasonable times to the Property and to any other property owned or controlled by Purchaser to which access is required for the implementation of response actions at the Site. EPA agrees to provide reasonable notice to Purchaser of the timing of response actions to be undertaken at the Property and other areas owned or controlled by Purchaser. Notwithstanding any provision of this Settlement Agreement, the United States retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and other authorities.

18. Purchaser shall submit to EPA for review and approval a notice to be filed with the Recorder's Office or other appropriate office, King County, State of Washington, which shall provide notice to all successors-in-title that the Property is part of the Site, that EPA issued Action Memoranda on September 30, 2010 and March 17, 2015 (as corrected on June 24, 2015) providing for the performance of a removal action at the Property. Purchaser shall record the notice(s) within fifteen (15) days of EPA's approval of the notice(s). Purchaser shall provide EPA with a certified copy of the recorded notice(s) within seven (7) days of recording such notices.

19. Purchaser shall implement and comply with any land use restrictions and institutional controls on the Property.

20. For so long as Purchaser is an owner or operator of the Property, Purchaser shall require that assignees, successors in interest, and any lessees, sublessees and other parties with rights to use the Property shall provide access and cooperation to EPA, its authorized officers, employees, representatives, and all other persons performing response actions under EPA oversight. Purchaser shall require that assignees, successors in interest, and any lessees, sublessees, and other parties with rights to use the Property implement and comply with any land use restrictions and institutional controls on the Property, and not contest EPA's authority to enforce any such land use restrictions and institutional controls on the Property.

21. Upon sale or other conveyance of the Property or any part thereof, Purchaser shall require that each grantee, transferee or other holder of an interest in the Property or any part thereof shall provide access and cooperation to EPA, its authorized officers, employees, representatives, and all other persons performing response actions under EPA oversight. Purchaser shall require that each grantee, transferee or other holder of an interest in the Property or any part thereof shall implement and comply with any land use restrictions and institutional controls on the Property in connection with a response action and not contest EPA's authority to enforce any such land use restrictions and institutional controls on the Property.

22. Purchaser shall provide a copy of this Settlement Agreement to any current lessee, sublessee, and other party with rights to use the Property as of the Effective Date.

XI. RECORD RETENTION, DOCUMENTATION, AND AVAILABILITY OF INFORMATION

23. Purchaser shall preserve all documents and information in its possession relating to the Work, or relating to the hazardous substances, pollutants or contaminants found on or released from the Property, and shall submit them to EPA upon completion of the Work required by this Settlement Agreement, or earlier if requested by EPA.

24. Business Confidential Claims. Purchaser may assert that all or part of a Record provided to EPA pursuant to this Settlement Agreement is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Purchaser shall segregate and clearly identify all Records or parts thereof submitted under this Order for which Purchaser assert business confidentiality claims. Records claimed as confidential business information will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA, or if EPA has notified Purchaser that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Purchaser.

XII. DISPUTE RESOLUTION

25. The dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The United States and Purchaser shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally. If the United States contends that Purchaser is in violation of this

Settlement Agreement, the United States shall notify Purchaser in writing, setting forth the basis for its position. Purchaser may dispute the United States' position pursuant to Paragraph 26.

26. If Purchaser disputes the United States' position with respect to Purchaser's compliance with this Settlement Agreement or objects to any United States action taken pursuant to this Settlement Agreement, Purchaser shall notify EPA in writing of its position unless the dispute has been resolved informally. The United States may reply, in writing, to Purchaser's position within thirty (30) days of receipt of Purchaser's notice. The United States and Purchaser shall have twenty (20) days from EPA's receipt of Purchaser's written statement of position to resolve the dispute through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of the United States. Such extension may be granted orally but must be confirmed in writing.

27. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by both Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official in the Region 10 Office of Environmental Cleanup at or above the level of Unit Chief will review the dispute on the basis of the Parties' written statements of position and issue a written decision on the dispute. That written decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Purchaser's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Purchaser shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with the written decision, whichever occurs.

XIII. CERTIFICATION

28. By entering into this Settlement Agreement, Purchaser certifies that to the best of its knowledge and belief it has fully and accurately disclosed to the United States all information known to Purchaser and all information in the possession or control of its officers, directors, employees, contractors and agents which relates in any way to any Existing Contamination or any past or potential future release of hazardous substances, pollutants or contaminants at or from the Site and to its qualification for this Settlement Agreement. Purchaser also certifies that to the best of its knowledge and belief it has not caused or contributed to a release or threat of release of hazardous substances or pollutants or contaminants at the Site. If the United States determines that information provided by Purchaser is not materially accurate and complete, this Settlement Agreement, within the sole discretion of the United States, shall be null and void and EPA reserves all rights it may have.

XIV. COVENANT NOT TO SUE BY UNITED STATES

29. Except as provided in Section XV (Reservation of Rights by the United States) and in consideration of the actions that will be performed and the payments that will be made by Purchaser under the terms of this Settlement Agreement, the United States covenants not to sue or to take administrative action against Purchaser pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for Existing Contamination. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory

performance by Purchaser of all obligations under this Settlement Agreement, including, but not limited to, performance of the Work required by this Settlement Agreement and the payment required pursuant to Paragraph 16. This covenant not to sue extends only to Purchaser and does not extend to any other person.

XV. RESERVATION OF RIGHTS BY UNITED STATES

30. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent the United States from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary.

31. The covenant not to sue set forth in Section XIV, above, does not pertain to any matters other than those expressly identified therein. The United States reserves, and this Settlement Agreement is without prejudice to, all rights against Purchaser with respect to all other matters, including, but not limited to:

- a. liability for failure by Purchaser to meet a requirement of this Settlement Agreement;
- b. criminal liability;
- c. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- d. liability for violations of federal, state, or local law or regulations during or after implementation of the Work other than as provided in the Workplan, the Work, or otherwise ordered by EPA;
- e. liability resulting from the release or threat of release of hazardous substances, pollutants or contaminants at or in connection with the Site after the Effective Date, not within the definition of Existing Contamination;
- f. liability resulting from exacerbation of Existing Contamination by Purchaser, its agents, contractors, sub-contractors, successors, assigns, lessees, or sublessees;
- g. liability arising from Purchaser's, its agents', or employees' disposal, release or threat of release of Waste Materials outside of the Site.
- h. liability for failure of performance of a MTCA RI/FS and Remedial Action for the Property.

32. With respect to any claim or cause of action asserted by the United States, Purchaser shall bear the burden of proving that the claim or cause of action, or any part thereof,

is attributable solely to Existing Contamination and that Purchaser has complied with all of the requirements of 42 U.S.C. § 9601(40).

XVI. COVENANT NOT TO SUE BY PURCHASER

33. Purchaser covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to Existing Contamination, the Work, Payment of Response Costs or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of response actions, including any claim under the United States Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, or at common law; or

c. any claim pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), or state law.

34. Purchaser reserves, and this Settlement Agreement is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, and brought pursuant to any statute other than CERCLA or RCRA and for which the waiver of sovereign immunity is found in a statute other than CERCLA or RCRA, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States, as that term is defined in 28 U.S.C. § 2671, while acting within the scope of his or her office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, the foregoing shall not include any claim based on EPA's selection of response actions, or the oversight or approval, disapproval, or modification of Purchaser's plans, reports, other deliverables, or activities.

35. Nothing in this Settlement Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

XVII. EFFECT OF SETTLEMENT/CONTRIBUTION

36. Nothing in this Settlement Agreement precludes the United States or Purchaser from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any person not a party to this Settlement Agreement, including any claim Purchaser may have pursuant to Section 107(a)(4)(B). Nothing herein diminishes the right of the United States, pursuant to Sections 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2) and (3), to pursue any such persons to obtain additional response costs or response actions and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

37. If a suit or claim for contribution is brought against Purchaser, notwithstanding the provisions of Section 107(r)(1) of CERCLA, 42 U.S.C. § 9607(r)(1), with respect to Existing Contamination (including any claim based on the contention that Purchaser is not a BFPP, or has lost its status as a BFPP as a result of response actions taken in compliance with this Settlement Agreement or at the direction of EPA), the Parties agree that this Settlement Agreement shall then constitute an administrative settlement pursuant to which Purchaser has, as of the Effective Date, resolved liability to the United States within the meaning of Sections 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) of CERCLA, or as may be otherwise provided by law, for the "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are all response actions taken or to be taken and all response costs incurred or to be incurred by the United States or by any other person with respect to Existing Contamination.

38. If Purchaser is found, in connection with any action or claim it may assert to recover costs incurred or to be incurred with respect to Existing Contamination, not to be a BFPP, or to have lost its status as a BFPP as a result of response actions taken in compliance with this Settlement Agreement or at the direction of EPA, the Parties agree that this Settlement Agreement shall then constitute an administrative settlement pursuant to which Purchaser has, as of the Effective Date, resolved liability to the United States within the meaning of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

39. Purchaser agrees that with respect to any suit or claim brought by it for matters related to this Settlement Agreement it will notify the United States in writing no later than 60 days prior to the initiation of such suit or claim.

40. Purchaser also agrees that with respect to any suit or claim for contribution brought against it for matters related to this Settlement Agreement it will notify the United States in writing within 10 days of service of the complaint on it. In addition, Purchaser agrees that it will notify the United States within 10 days of service or receipt of any Motion for Summary Judgment and within 10 days of receipt of any order from a court setting a case for trial, for matters related to this Settlement Agreement.

XVIII. RELEASE AND WAIVER OF LIEN(S)

41. Subject to the Reservation of Rights in Section XV of this Settlement Agreement, upon satisfactory completion of the Work specified in Section VIII (Work to be Performed) and the Payment due under Section IX, EPA agrees to release and waive any lien it may have on the Property now and in the future under Section 107(r) of CERCLA, 42 U.S.C. § 9607(r), for costs incurred or to be incurred by EPA in responding to the release or threat of release of Existing Contamination.

XIX. INDEMNIFICATION

42. Purchaser shall indemnify, save, and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of

Purchaser, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Purchaser agrees to pay the United States all costs incurred by the United States, including but not limited to attorneys' fees and other expenses of litigation, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Purchaser, Purchaser's officers, directors, employees, agents, contractors, subcontractors, and any persons acting on Purchaser's behalf or under Purchaser's control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Purchaser in carrying out activities pursuant to this Settlement Agreement. Neither Purchaser nor any such contractor shall be considered an agent of the United States.

43. The United States shall give Purchaser notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Purchaser prior to settling such claim.

44. Purchaser waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Purchaser and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Purchaser shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Purchaser and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XX. MODIFICATION

45. Any requirements of this Settlement Agreement may be modified in writing by mutual agreement of the Parties.

46. No informal advice, guidance, suggestion, or comment by any EPA representative regarding reports, plans, specifications, schedules, or any other writing submitted by Purchaser shall relieve Purchaser of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXI. ATTACHMENTS

47. The following attachments are attached to and incorporated into this Settlement Agreement.

- a. Attachment A is an aerial photograph of the Property depicting its location relative to surrounding parcels and the LDW Superfund Site;
- b. Attachment B is an aerial photograph of the LDW Superfund Site;
- c. Attachment C is the Administrative Order on Consent entitled *In the Matter of: Jorgensen Forge Outfall Site, the Boeing Company and Jorgensen Forge*

Corporation, Respondents, Administrative Order on Consent for Removal Action, U.S. EPA Region 10, CERCLA Docket No. 10-2001-0017 (12/01/2010) as amended (the "Jorgensen Forge Outfall AOC");

d. Attachment D is the the March 17, 2015 Amendment to the Action Memorandum for the Removal Action at the Jorgensen Forge Outfall Site, Lower Duwamish Waterway Superfund Site, Seattle, King County, Washington as corrected on June 24, 2015;

e. Attachment E is the Third Modification to the Administrative Order on Consent for the Removal Action, CERCLA Docket No. 10-2011-0017 (03/08/2016);

f. Attachment is the EPA letter extending the date for commencing the work required by the Third Amendment to the Jorgensen Forge Outfall AOC; and

g. Attachment G is the Escrow Agreement.

XXII. NOTICE OF COMPLETION

48. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including continued compliance with CERCLA § 101(40) with respect to the Property in accordance with Paragraph 6 of this Settlement Agreement, post-removal site controls, record retention, compliance with access and institutional control obligations, EPA will provide written notice to Purchaser. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Purchaser, provide a list of the deficiencies, and require that Purchaser correct such deficiencies. Purchaser shall correct such deficiencies and shall submit a modified Final Report in accordance with the EPA notice. Failure by Purchaser to correct such deficiencies and submit a modified Final Report reflecting that deficiencies have been corrected shall be a violation of this Settlement Agreement.

XXIII. EFFECTIVE DATE

49. The Effective Date of this Settlement Agreement shall be the date upon which the United States Department of Justice issues written notice to Purchaser that the United States Department of Justice has fully executed the Settlement Agreement after review of and response to any public comments received.

XXIV. DISCLAIMER

50. This Settlement Agreement in no way constitutes a finding by EPA as to the risks to human health and the environment which may be posed by contamination at the Property or the Site nor constitutes any representation by EPA that the Property or the Site is fit for any particular purpose.

XXV. PAYMENT OF COSTS

51. If Purchaser fails to comply with the terms of this Settlement Agreement, it shall be liable for all litigation and other enforcement costs incurred by the United States to enforce this Settlement Agreement or otherwise obtain compliance.

XXVI. NOTICES AND SUBMISSIONS

52. Any notices, documents, information, reports, plans, approvals, disapprovals, or other correspondence required to be submitted from one party to another under this Settlement Agreement, shall be deemed submitted either when hand-delivered or as of the date of receipt by certified mail/return receipt requested, express mail, or facsimile.

Submissions to Purchaser shall be addressed to:

Star Forge, LLC
c/o GoldenTree Asset Management LP
300 Park Avenue, 20th Floor
New York, NY 10022
Attn: Daniel E. Flores

With copies to:

Akin Gump Strauss Hauer & Feld LLP
1333 New Hampshire Avenue, N.W.
Washington, DC 20036
Attn: David Quigley, Esq.
dquigley@akingump.com

Submissions to U.S. EPA shall be addressed to:

Ted Yackulic
Assistant Regional Counsel
U.S. EPA, Region 10
1200 Sixth Avenue
Seattle, WA 98101

With copies to:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Ref. No. 90-11-3-07227/8

XXVII. PUBLIC COMMENT

53. This Settlement Agreement shall be subject to a seven-day public comment period, after which the United States may modify or withdraw its consent to this Settlement Agreement if comments received disclose facts or considerations which indicate that this Settlement Agreement is inappropriate, improper or inadequate.

The undersigned representative of Purchaser certifies that it is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party it represents to this document.

IT IS SO AGREED:

BY:

Name (Purchaser)

Date

IT IS SO AGREED:

UNITED STATES DEPARTMENT OF JUSTICE

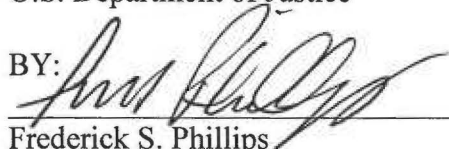
JOHN C. CRUDEN

Assistant Attorney General

Environment and Natural Resources Division

U.S. Department of Justice

BY:



Frederick S. Phillips

11-10-16

Date

Senior Attorney, Environmental Enforcement Section

Environment and Natural Resources Division

U.S. Department of Justice

IT IS SO AGREED:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

BY:

Regional Administrator

Date

Region 10

XXVII. PUBLIC COMMENT

53. This Settlement Agreement shall be subject to a seven-day public comment period, after which the United States may modify or withdraw its consent to this Settlement Agreement if comments received disclose facts or considerations which indicate that this Settlement Agreement is inappropriate, improper or inadequate.

The undersigned representative of Purchaser certifies that it is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party it represents to this document.

IT IS SO AGREED:
BY:

Name (Purchaser) Date

IT IS SO AGREED:
UNITED STATES DEPARTMENT OF JUSTICE
BY:

John C. Cruden Date
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice

Frederick S. Phillips Date
Senior Attorney, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice

IT IS SO AGREED:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BY:

 11/9/2016

Regional Administrator Date
Region 10

ATTACHMENT A



ATTACHMENT B

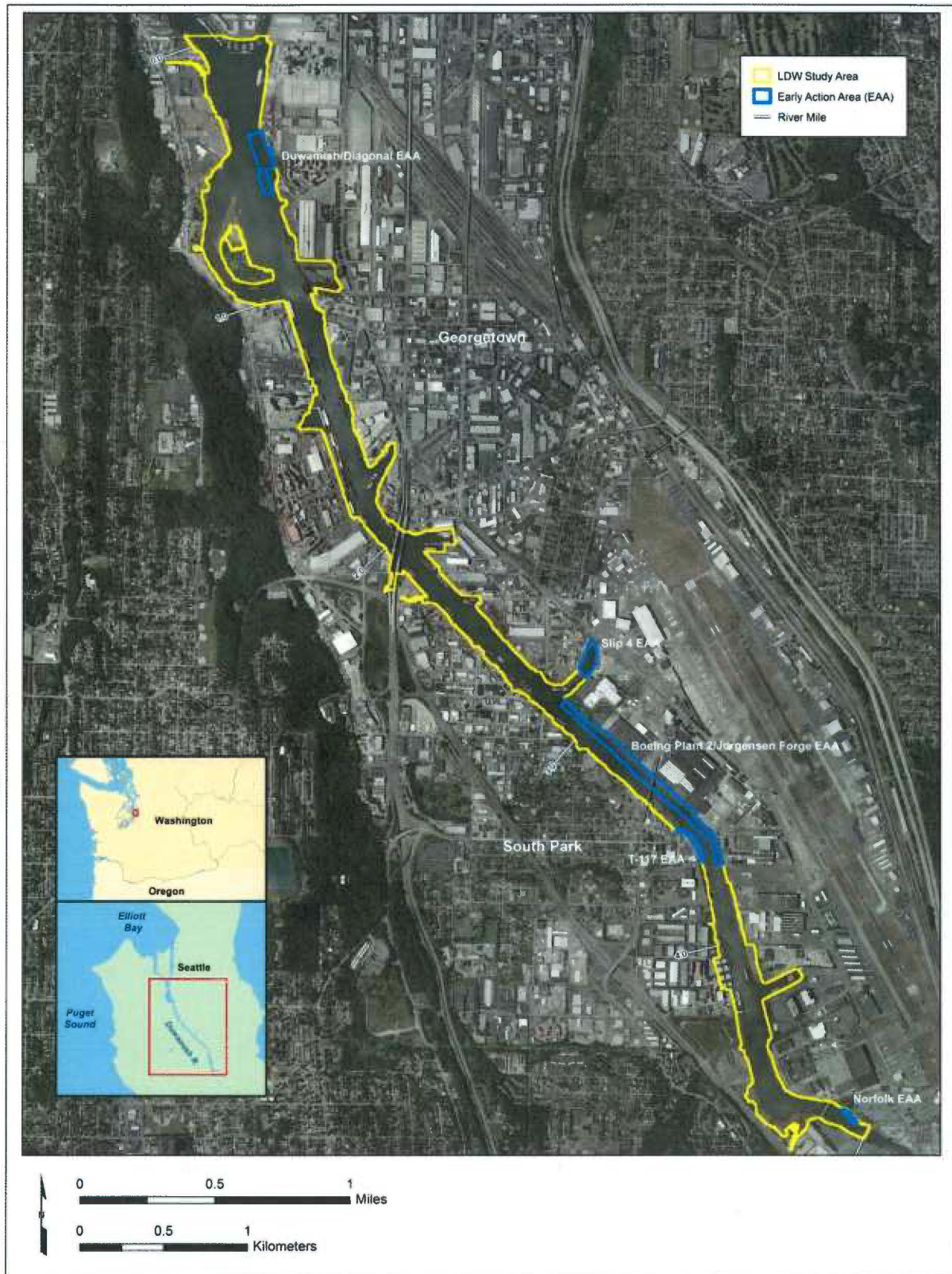


Figure 1. Lower Duwamish Waterway and Early Action Areas

ATTACHMENT C

LDWSF
12.6.1

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 10

IN THE MATTER OF:

ADMINISTRATIVE ORDER ON
CONSENT FOR REMOVAL ACTION

Jorgensen Forge Outfall Site

The Boeing Company and Jorgensen Forge
Corporation,

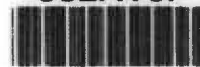
U.S. EPA Region 10
CERCLA Docket No. 10-2011-0017

Respondents

Proceeding Under Sections 104, 106(a), 107
and 122 of the Comprehensive
Environmental Response, Compensation,
and Liability Act, as amended, 42 U.S.C. §§
9604, 9606(a), 9607 and 9622

JORGENSEN FORGE OUTFALL REMOVAL ORDER ON CONSENT -- 1

USEPA SF



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Lower Duwamish (Jorgensen Forge), 12/1/10

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order on Consent ("Order") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and The Boeing Company and Jorgensen Forge Corporation ("Respondents"). This Order provides for the performance of a removal action by Respondents and the reimbursement of certain response costs incurred by the United States at or in connection with the property located at 8531 E. Marginal Way S. in Seattle, Washington, the "Jorgensen Forge Outfall Site" or the "Site."

2. This Order is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended ("CERCLA").

3. EPA has notified the State of Washington (the "State") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

4. EPA and Respondents recognize that this Order has been negotiated in good faith and that the actions undertaken by Respondents in accordance with this Order do not constitute an admission of any liability. Respondents do not admit, and retain the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Order, the validity of the findings of facts, conclusions of law, and determinations in Sections IV and V of this Order. Respondents agree to comply with and be bound by the terms of this Order and further agree that they will not contest the basis or validity of this Order or its terms.

II. PARTIES BOUND

5. This Order applies to and is binding upon EPA and upon Respondents and their successors and assigns. Any change in ownership or corporate status of a Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent's responsibilities under this Order.

6. Respondents are jointly and severally liable for carrying out all activities required by this Order. In the event of the insolvency or other failure of any one or more Respondents to implement the requirements of this Order, the remaining Respondents shall complete all such requirements.

7. Respondents shall ensure that their contractors, subcontractors, and representatives receive a copy of this Order and comply with this Order. Respondents shall be responsible for any noncompliance with this Order.

III. DEFINITIONS

8. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Order or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "Action Memorandum" shall mean the EPA Action Memorandum relating to the Site issued by EPA Region 10, and all attachments thereto. The "Action Memorandum" is attached as Appendix A.

b. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

c. "Day" shall mean a calendar day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

d. "Effective Date" shall be the effective date of this Order as provided in Section XXXII.

e. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

f. "Ecology" shall mean the Washington Department of Ecology and any successor departments or agencies of the State.

g. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Order, verifying the Work, or otherwise implementing, overseeing, or enforcing this Order, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Paragraph 23 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 33 (emergency response) and Paragraph 59 (work takeover). Future Response Costs shall also include all Interim Response Costs.

h. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

i. "Interim Response Costs" shall mean all costs, including direct and indirect costs, a) paid by the United States in connection with the Site between June 1, 2010 and the Effective Date, or b) incurred prior to the Effective Date, but paid after that date.

j. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

k. "Order" shall mean this Administrative Order on Consent and all appendices attached hereto (listed in Section XXXI). In the event of conflict between this Order and any appendix, this Order shall control.

l. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

m. "Parties" shall mean EPA and Respondents.

n. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, *et seq.* (also known as the Resource Conservation and Recovery Act).

o. "Respondents" shall mean The Boeing Company and Jorgensen Forge Corporation.

p. "Section" shall mean a portion of this Order identified by a Roman numeral.

q. "Site" shall mean the Jorgensen Forge Outfall Site, part of the Lower Duwamish Waterway Superfund Site, located at 8531 E. Marginal Way S. in Seattle, Washington and depicted generally on the map attached as Appendix C.

r. "State" shall mean the State of Washington.

s. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the removal action, as set forth in Appendix A to this Order, and any modifications made thereto in accordance with this Order.

t. "Waste Material" shall mean 1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); 2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); 3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and 4) any "dangerous waste" under RCW 70.95E.010(1).

u. "Work" shall mean all activities Respondents are required to perform under this Order.

IV. FINDINGS OF FACT

9. EPA makes the following findings of fact without any express or implied admissions of such facts by Respondents:

a. Respondent The Boeing Company ("Boeing") is a Delaware corporation doing business in the state of Washington primarily engaged in aerospace and defense technology.

b. Respondent Jorgensen Forge Corporation ("Jorgensen") is a Washington corporation primarily engaged at the Site in metal forging, fabrication, smelting, reclamation and recycling.

c. The Jorgensen Forge Outfall Site is a 24-inch outfall and an adjacent 15-inch outfall running along the northern boundary of the currently operating Jorgensen Forge facility. These outfalls discharge and/or have discharged hazardous substances, including polychlorinated biphenyls ("PCBs") into the Lower Duwamish Waterway ("LDW"), as set forth in the appended Action Memorandum. Respondent Boeing owns and operates its Plant 2 facility bordering the Jorgensen Forge facility to the north, and has contributed to discharges from the outfalls.

d. Respondent Jorgensen is implementing a removal action for the Jorgensen Forge facility pursuant to a non-time critical removal action ("NTCRA") CERCLA Administrative Order on Consent issued by EPA to address a sediment Early Action Area ("EAA") of the LDW Superfund Site, as well as a Consent Order issued by Ecology for LDW upland source control, neither of which is addressing the outfall that is the subject of this Order.

e. Respondent Boeing is implementing RCRA corrective action for its Plant 2 facility pursuant to a RCRA Administrative Order on Consent issued by EPA. Under this Order it is implementing an interim measure to address the Plant 2 sediment EAA of the LDW Superfund Site north of and contiguous with the Jorgensen EAA. The Jorgensen and Boeing EAA Orders have an identical Amendment requiring coordination and cooperation for the transition zone between these sediment EAAs. Respondents have agreed to cooperatively jointly implement this Order to implement the Action Memorandum dated September 30, 2010, for this Site (Appendix A).

V. CONCLUSIONS OF LAW AND DETERMINATIONS

10. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, EPA makes the following conclusions of law and determinations, without the express or implied admissions of such conclusions or determinations by Respondents:

a. The Jorgensen Forge Outfall Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Each Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Each Respondent was either an owner or operator or arranged for disposal of hazardous substances at or from the facility and is therefore a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is jointly and severally liable for performance of response action and for response costs incurred and to be incurred at the Site.

e. The conditions described in appended Action Memorandum and the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The removal action required by this Order is a "removal" and "response" as defined by Sections 101(23) and (25) of CERCLA, 42 U.S.C. §§ 9601(23) and (25), and within the meaning of Sections 104(a)(1) and 107(a) of CERCLA, 42 U.S.C. §§ 9604(a)(1) and 9607(a).

g. The removal action required by this Order is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Order, will be considered consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VI. ORDER

Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondents shall comply with all provisions of this Order, including, but not limited to, all attachments to this Order and all documents incorporated by reference into this Order.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

11. Respondents shall retain one or more contractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) within 7 days of the Effective Date. Respondents shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 7 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondents. If EPA disapproves of a selected contractor, Respondents shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 30 days of EPA's disapproval. The proposed contractor must demonstrate compliance with ANSI/ASQC E-4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B0-1/002), or equivalent documentation.

12. Within 7 days after the Effective Date, Respondents shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondents required by this Order and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 30 days following EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by all Respondents.

13. EPA has designated Michael Sibley of the Emergency Response Unit of the Environmental Cleanup Office, Region 10, as its On-Scene Coordinator ("OSC"). Except as otherwise provided in this Order, Respondents shall direct all submissions required by this Order to the OSC at 1200 Sixth Avenue, Seattle WA 98101-1128, M/S ECL-116, or electronically as the OSC may permit at Sibley.Michael@epa.gov. EPA and Respondents shall have the right, subject to Paragraph 12, to change their respective designated OSC or Project Coordinator. Respondents shall notify EPA 7 days before such a change is made. The initial notification may be made orally, but shall be followed by a written notice within 48 hours.

VIII. WORK TO BE PERFORMED

14.a. Respondents shall perform, at a minimum, all actions necessary to implement the Action Memorandum in accordance with the Work Plan. The actions to be implemented generally include, but are not limited to, the following:

1. Clean, close, and seal the 24-inch outfall pipe and the adjacent 15-inch Boeing pipe (collectively, Pipes), which transit the northern portion of the Facility, in place with ash-fill or other inert material, and re-route the storm water to another outflow location off site.

2. The proposed work activities within these Pipes will be limited to the concrete portion of these Pipes which extend from the up-gradient Facility eastern property line to the down-gradient intersection of the concrete-corrugated metal pipe (CMP) connections in the Pipes near the western property line.

3. Plug off the influent and effluent ends of the storm water line.

- a. The objective of the work activities are to:

1. Eliminate stormwater discharges from the Pipes to the LDW.
 2. Remove the solids and associated contamination from the Pipes.

- b. Achievement of Objective 1 and 2 will be assessed through completion of the following performance standards:

1. Verifying that the Pipe closure points have been plugged, thereby eliminating discharges to the LDW.

2. Completion of post-cleanup video reconnaissance survey to document that visible solids and standing water within the cleaned portions of the Pipes are removed.

c. The method of closure will be determined based on coordination with EPA, but the anticipated methods are either plugging the Pipes with concrete or similar material or installing a permanent expansion plug that is shown to create a complete seal.

d. The proposed closure locations are:

1. Transition between the CMP and concrete portions of both Pipes.
2. Up-gradient of SDMH-15B within the 15-inch Pipe angling onto Plant 2.
3. Down-gradient pipe entrance to the 24-inch Pipe within the "Public" manhole located just east of the facility fence line.
4. Up-gradient of SDMH-11 within the 15-inch lateral connection to the 24-inch Pipe.
5. Each manhole location providing access to the Pipes on the Jorgensen facility, excluding the "Public" manhole located just east of the Jorgensen fence line.

e. There is no structure at the transition between the CMP and concrete portions of the Pipes; therefore, in order to perform the temporary and final plugging at the transition point to CMP, soil will be excavated to expose the transition area.

f. The method of cleanout will be determined based on coordination with EPA, but the anticipated method is jet washing the Pipes and associated accessible laterals. The cleanout activities will be conducted such that no wash water or solids will discharge to the LDW.

g. A video survey will be performed following the cleaning to verify that solids and wash waters have been removed. Cleaning will be repeated as necessary until the Pipes and accessible laterals are free of solids.

h. Water and solids generated by the cleaning of catch basins will be collected and managed as necessary to support disposal at the appropriate permitted facilities. The precise methods for water/solids collection, treatment and disposal will be determined based on coordination with EPA.

15. Work Plan and Implementation.

a. Within 7 days after the Effective Date, Respondents shall submit to EPA for approval a draft Work Plan for performing the removal action generally described in Paragraph 14 above. The draft Work Plan shall provide a description of, and an expeditious schedule for, the actions required by this Order including a Quality Assurance Project Plan ("QAPP") prepared in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001), and "EPA Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-98/018, February 1998).

b. EPA may approve, disapprove, require revisions to, or modify the draft Work Plan in whole or in part. If EPA requires revisions, Respondents shall submit a revised draft Work

Plan within 15 days of receipt of EPA's notification of the required revisions. Respondents shall implement the Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Order.

c. Respondents shall not commence any Work except in conformance with the terms of this Order. Respondents shall not commence implementation of the Work Plan developed hereunder until receiving written EPA approval pursuant to Paragraph 15(b).

16. Health and Safety Plan. Within 10 days after the Effective Date, Respondents shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-Site work under this Order. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondents shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the removal action.

17. Quality Assurance and Sampling.

a. All sampling and analyses performed pursuant to this Order shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondents shall follow, as appropriate, "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures" (OSWER Directive No. 9360.4-01, April 1, 1990), as guidance for QA/QC and sampling. Respondents shall only use laboratories that have a documented Quality System that complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2) (EPA/240/B-01/002, March 2001)," or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements.

b. Upon request by EPA, Respondents shall have such a laboratory analyze samples submitted by EPA for QA monitoring. Respondents shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

c. Upon request by EPA, Respondents shall allow EPA or its authorized representatives to take split and/or duplicate samples. Respondents shall notify EPA not less than 7 days in advance of any sample collection activity, unless shorter notice is agreed to by EPA.

EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondents to take split or duplicate samples of any samples it takes as part of its oversight of Respondents' implementation of the Work.

18. Post-Removal Site Control. In accordance with the Work Plan schedule, or as otherwise directed by EPA, Respondents shall submit a proposal for post-removal site control consistent with Section 300.415(f) of the NCP and OSWER Directive No. 9360.2-02. Upon EPA approval, Respondents shall implement such controls and shall provide EPA with documentation of all post-removal site control arrangements.

19. Reporting.

a. Respondents shall submit a written progress report to EPA on the 1st day of each month concerning actions undertaken in the prior month pursuant to this Order after the date of receipt of EPA's approval of the Work Plan until termination of this Order, unless otherwise directed in writing by the OSC. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

b. Respondents shall submit 5 copies of all plans, reports or other submissions required by this Order, including the SOW or any approved work plan. Upon request by EPA, Respondents shall submit such documents in electronic form.

c. Respondents who own or control property at the Site shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice to the transferee that the property is subject to this Order and written notice to EPA of the proposed conveyance, including the name and address of the transferee. Respondents who own or control property at the Site also agree to require that their successors comply with the immediately preceding sentence and Sections IX (Site Access) and X (Access to Information).

20. Final Report. Within 60 days after completion of all Work required by this Order, Respondents shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Order. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

21. Off-Site Shipments.

a. Respondents shall, prior to any off-Site shipment of Waste Material that is generated pursuant to this Order from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to the OSC. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards in a calendar year.

i. Respondents shall include in the written notification the following information: 1) the name and location of the facility to which the Waste Material is to be shipped; 2) the type and quantity of the Waste Material to be shipped; 3) the expected schedule for the shipment of the Waste Material; and 4) the method of transportation. Respondents shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

ii. The identity of the receiving facility and state will be determined by Respondents following the award of the contract for the removal action. Respondents shall provide the information required by Paragraph 21(a) and 21(b) as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

b. Before shipping any hazardous substances, pollutants, or contaminants that are generated pursuant to this Order from the Site to an off-site location, Respondents shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondents shall only send hazardous substances, pollutants, or contaminants that are generated pursuant to this Order from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

IX. SITE ACCESS

22. If the Site, or any other property where access is needed to implement this Order, is owned or controlled by any of the Respondents, such Respondents shall, commencing on the Effective Date, provide EPA and the other Respondent, and their representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Order.

23. Where any action under this Order is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain

all necessary access agreements within 15 days after the Effective Date, or as otherwise specified in writing by the OSC. Respondents shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondents shall describe in writing their efforts to obtain access. EPA may then assist Respondents in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondents shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

24. Notwithstanding any provision of this Order, EPA and the State retain all of its their access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

X. ACCESS TO INFORMATION

25. Respondents shall provide to EPA and the State, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA and the State, through Respondents' respective counsel if Respondents so choose, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

26. Respondents may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the State under this Order to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA and the State, or if EPA has notified Respondents that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondents.

27. Respondents may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondents assert such a privilege in lieu of providing documents, they shall provide EPA and the State with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondents. However, no data, final documents, or reports created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

28. No claim of confidentiality shall be made with respect to any data generated pursuant to the requirements of this Order, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

XI. RECORD RETENTION

29. Until 10 years after Respondents' receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), each Respondent shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after Respondents' receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), Respondents shall also instruct their contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to performance of the Work. All documents, records and other information required to be retained under this Paragraph may be retained in electronic rather than paper form.

30. At the conclusion of this document retention period, Respondents shall notify EPA and the State at least 90 days prior to the destruction of any such records or documents, and, upon request by EPA or the State, Respondents shall deliver any such records or documents to EPA or the State. Respondents may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondents assert such a privilege, they shall provide EPA or the State with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Respondents. However, no data, final documents, or reports created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

31. Each Respondent hereby certifies individually that to the best of its knowledge and belief, after a diligent and reasonable inquiry that fully complies with the Federal Rules of Civil Procedure, it has not intentionally altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the filing of suit against it regarding the Site and that it has, to the best of its knowledge and belief fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XII. COMPLIANCE WITH OTHER LAWS

32. Respondents shall perform all actions required pursuant to this Order in accordance with all applicable local, state, and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws. Respondents shall identify ARARs in the Work Plan subject to EPA approval.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

33. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action. Respondents shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the OSC or, in the event of his/her unavailability, the Regional Duty Officer, Environmental Cleanup Office, Emergency Response Unit, EPA Region X, 206-553-1263, and the National Response Center at (800) 424-8802 of the incident or Site conditions. In the event that Respondents fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondents shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs).

34. In addition, in the event of any release of a hazardous substance from the Site, Respondents shall immediately notify the OSC at 206-553-1886, or in the event of his/her unavailability, the Regional Duty Officer, Environmental Cleanup Office, Emergency Response Unit, EPA Region X, 206-553-1263. Respondents shall submit a written report to EPA within 7 days after each release; setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

XIV. AUTHORITY OF ON-SCENE COORDINATOR

35. The OSC shall be responsible for overseeing Respondents' implementation of this Order. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Order. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

XV. PAYMENT OF RESPONSE COSTS

36. Payments for Future Response Costs.

a. Respondents shall pay EPA all Future Response Costs (including Interim Response Costs) not inconsistent with the NCP. On a periodic basis, EPA will send Respondents a bill requiring payment that includes a SCORPIOS or other regionally prepared cost summary, which includes direct and indirect costs incurred by EPA and its contractors. Respondents shall make all payments within 30 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 39 of this Order.

b. Respondents shall make all payments required by this Paragraph either by Electronic Funds Transfer (EFT) or by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the parties making payment and EPA Site/Spill ID number 10JA and the EPA Docket Number CERCLA 10-2011-0017. Respondents shall send the check(s) to: U.S. EPA, Superfund Payments, Cincinnati Finance Center, P.O. Box 979076, St. Louis, MO 63197-9000. EFT payments shall be directed to the Federal Reserve Bank of New York as follows: Federal Reserve Bank of New York, ABA=02103004, Account=68010727, 33 Liberty Street, New York, NY 10045. Field Tag 4200 of the Fedwire message should read "D68010727 Environmental Protection Agency (10DA)."

c. At the time of payment, Respondents shall send notice that payment has been made to the OSC as set forth in Paragraph 13 above, and to the U.S., EPA, Finance Center MS-NWD, Cincinnati, OH 45268.

37. In the event that payments for Future Response Costs are not made within 30 days of Respondents' receipt of a bill, Respondents shall pay Interest on the unpaid balance.

38. The Interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

39. Respondents may dispute all or part of a bill for Future Response Costs submitted under this Order, if Respondents allege that EPA has made an accounting error, or if Respondents allege that a cost item is inconsistent with the NCP. If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondents shall pay the full amount of the uncontested costs to EPA as specified in Paragraph 36 on or before the due date. Within the same time period, Respondents shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondents shall simultaneously transmit a copy of both checks to the persons listed in Paragraph 36(c) above. Respondents shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within 15 days after the dispute is resolved.

XVI. DISPUTE RESOLUTION

40. Unless otherwise expressly provided for in this Order, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Order. The Parties shall attempt to resolve any disagreements concerning this Order expeditiously and informally.

41. If Respondents object to any EPA action taken pursuant to this Order, including billings for Future Response Costs, they shall notify EPA in writing of their objection(s) within 15 days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondents shall have 15 days from EPA's receipt of Respondents' written objection(s) to resolve the dispute through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

42. Any agreement reached by the parties pursuant to this Section shall be in writing and shall, upon signature by both parties, be incorporated into and become an enforceable part of this Order. If the Parties are unable to reach an agreement within the Negotiation Period, the Director of the EPA Region 10 Office of Environmental Cleanup Office (ECL) or his/her Associate Director (ECL Director) will issue a written decision on the dispute to Respondents. EPA will maintain a record of the dispute, including correspondence and submittals related to the dispute. EPA's decision shall be incorporated into and become an enforceable part of this Order. Respondents' obligations under this Order shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

XVII. FORCE MAJEURE

43. Respondents agree to perform all requirements of this Order within the time limits established under this Order, unless the performance is delayed by a *force majeure*. For purposes of this Order, a *force majeure* is defined as any event arising from causes beyond the control of Respondents, or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Order despite Respondents' best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work, or increased cost of performance, or a failure to attain performance standards set forth in the Action Memorandum.

44. If any event occurs or has occurred that may delay the performance of any obligation under this Order, whether or not caused by a *force majeure* event, Respondents shall notify EPA orally within 24 hours of when Respondents first knew that the event might cause a delay. Within 10 days thereafter, Respondents shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondents' rationale for attributing such delay to a *force majeure* event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondents, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the above requirements shall preclude Respondents from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

45. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Order that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondents in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondents in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. STIPULATED PENALTIES

46. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 47 and 48 for failure to comply with the requirements of this Order specified below, unless excused under Section XVII (*Force Majeure*) or otherwise modified in writing by the EPA. "Compliance" by Respondents shall include completion of the activities under this Order or any work plan or other plan approved under this Order identified below in accordance with all applicable requirements of law, this Order, including any plans or other documents approved by EPA pursuant to this Order and within the specified time schedules established by and approved under this Order.

47. Stipulated Penalty Amounts - Work.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 47(b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,000	1st through 14th day
\$2,500	15th through 30th day
\$5,000	31st through 90 th day

b. Compliance Milestones

1. Timely adequate Removal Action Work Plan submission;
2. Timely adequate Removal Action Completion Report submission;
3. Satisfactory completion of the Work

48. Stipulated Penalty Amounts - Reports. The following stipulated penalties shall accrue per violation per day for failure to submit all other deliverables or submissions required by this Order or any Work Plan or deliverable in a timely or adequate manner:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$500	1st through 14th day
\$1,500	15th through 30th day
\$3,000	31st day and beyond

49. In the event that EPA assumes performance of a portion or all of the Work after making a determination pursuant to Paragraph 59 of Section XX, Respondents shall be liable for a stipulated penalty in the amount of \$25,000.

50. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondents of any deficiency; and 2) with respect to a decision by the ECL Director under Paragraph 42 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Order.

51. Following EPA's determination that Respondents have failed to comply with a requirement of this Order, EPA will give Respondents written notification of the failure and describe the noncompliance. EPA may also send Respondents a written demand for payment of

the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of when EPA has notified Respondents of a violation.

52. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondents' receipt from EPA of a demand for payment of the penalties, unless Respondents invoke the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to Mellon Bank, EPA-Region 10 Superfund, P.O. Box 371099M., Pittsburgh, PA 15251, shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 10JA, the EPA Docket Number CERCLA 10-2011-0017, and the name and address of the party(ies) making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to EPA as provided in Paragraph 12, and to the Financial Management Officer, EPA, Region 10, 1200 Sixth Avenue, M/S OMP-146, Seattle, Washington 98101-1128.

53. The payment of penalties shall not alter in any way Respondents' obligation to complete performance of the Work required under this Order.

54. Penalties shall continue to accrue during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

55. If Respondents fail to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondents shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 52. Nothing in this Order shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondents' violation of this Order or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(f) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(f), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(f) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of this Order or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX, Paragraph 59. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Order.

XIX. COVENANT NOT TO SUE BY EPA

56. In consideration of the actions that will be performed and the payments that will be made by Respondents under the terms of this Order, and except as otherwise specifically provided in this Order, EPA covenants not to sue or to take administrative action against Respondents pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for performance of the Work and for recovery of Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by

Respondents of all obligations under this Order, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondents and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

57. Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

58. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Order is without prejudice to, all rights against Respondents with respect to all other matters, including, but not limited to:

- a. claims based on a failure by Respondents to meet a requirement of this Order;
- b. liability for costs not included within the definition Future Response Costs;
- c. liability for performance of response action other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and
- g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site.

59. Work Takeover. In the event EPA determines that Respondents have ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in their performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA will so notify Respondents and may, thereafter, assume the performance of all or any portion of the Work as EPA determines necessary. Respondents may invoke the procedures set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by the United States in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay pursuant to Section XV (Payment of Response Costs).

Notwithstanding any other provision of this Order, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENTS

60. Respondents covenant not to sue and agree not to assert any claims or causes of action against the EPA, or its contractors or employees, with respect to the Work, Future Response Costs, or this Order, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of response actions at or in connection with the Site, completed pursuant to this Order, including any claim under the United States Constitution, the Washington State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work or Future Response Costs.

Except as provided in Paragraph 63 (Waiver of Claims), the covenants not to sue in Paragraph 60 shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 58 (b), (c), and (e) - (g), but only to the extent that Respondents' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

61. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

62. The covenant not to sue in Paragraph 60 does not include, and Respondents specifically reserve, their right to assert any and all claims or causes of action, including, but not limited to actions under Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, against agencies, departments or corporations of the United States other than the EPA.

63. Respondents agree not to assert any claims and to waive all claims or causes of action that they may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Respondents with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if the materials contributed by such person to the Site containing hazardous substances did not exceed the greater of i) 0.002% of the total volume of waste at the Site, or ii) 110 gallons of liquid materials or 200 pounds of solid materials.

64. This waiver shall not apply to any claim or cause of action against any person meeting the above criteria if EPA has determined that the materials contributed to the Site by such person contributed or could contribute significantly to the costs of response at the Site. This waiver also shall not apply with respect to any defense, claim, or cause of action that a Respondent may have against any person if such person asserts a claim or cause of action relating to the Site against such Respondent.

XXII. OTHER CLAIMS

65. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

66. Except as expressly provided in Paragraphs 60, 63 and 64 and Section XIX (Covenant Not to Sue by EPA), nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondents, the United States, or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

67. No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. CONTRIBUTION PROTECTION

68. The Parties agree that this Order constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondents are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Order. The "matters addressed" in this Order are the Work and Future Response Costs. Except as provided in Paragraphs 63 and 64 of this Order, nothing in this Order precludes the United States or Respondents from asserting any claims, causes of action, or demands against any persons not parties to this Order for indemnification, contribution, or cost recovery. Notwithstanding any provision of this Order or law, each Respondent specifically reserves, and this Order does not impair in any way, the right to assert any and all claims or causes of action, including, but not limited to actions under Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, against the other Respondent.

XXIV. INDEMNIFICATION

69. Respondents shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or

causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Order. In addition, Respondents agree to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Order. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondents in carrying out activities pursuant to this Order. Neither Respondents nor any such contractor shall be considered an agent of the United States.

70. The United States shall give Respondents written notice of any claim for which the United States plans to seek indemnification pursuant to this Section and within a reasonable time after the United States receives a demand or service of such claim, whichever occurs earliest, shall consult with Respondents prior to settling such claim. The United States shall not act unreasonably in resolving such claim.

71. Subject to and without waiver of Respondents' reservation of rights in Section XXI, Respondents waive all claims against EPA for damages or reimbursement or for set-off of any payments made or to be made to EPA, arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person other than EPA for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Respondents shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXV. INSURANCE

72. At least 7 days prior to commencing any Work on-Site under this Order, Respondents shall secure, and shall maintain for the duration of this Order, comprehensive general liability insurance and automobile insurance with limits of 5 million dollars, combined single limit. Within the same time period, Respondents shall provide EPA with certificates of such insurance. In addition, for the duration of the Order, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondents in furtherance of this Order. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

73. Within 60 days of the Effective Date, Respondents shall establish and maintain financial security in the amount of \$80,000 in one or more of the following forms:

- a. A surety bond guaranteeing performance of the Work;
- b. One or more irrevocable letters of credit for the total estimated cost of the Work;
- c. A trust fund;
- d. A guarantee to perform the Work by one or more parent corporations or subsidiaries, or by one or more unrelated corporations that have a substantial business relationship with at least one of Respondents; or
- e. A demonstration that one or more of the Respondents satisfy the requirements of 40 C.F.R. Part 264.143(f), including all CERCLA obligations in addition to those specified therein.

74. If Respondents seek to demonstrate the ability to complete the Work through a guarantee by a third party pursuant to Paragraph 73(a) of this Section, Respondents shall demonstrate that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f). If Respondents seek to demonstrate their ability to complete the Work by means of the financial test or the corporate guarantee pursuant to Paragraph 73(d) or (e) of this Section, they shall resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section are inadequate, Respondents shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 73 of this Section. Respondents' inability to demonstrate financial ability to complete the Work shall not excuse performance of any activities required under this Order.

75. If, after the Effective Date, Respondents can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 73 of this Section, Respondents may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondents shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security upon approval by EPA. In the event of a dispute, Respondents may reduce the amount of the security in accordance with the written decision resolving the dispute.

76. Respondents may change the form of financial assurance provided under this Section at any time, upon notice to and approval by EPA, provided that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondents may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

XXVII. MODIFICATIONS

77. The OSC may make modifications to any plan or schedule in writing or by oral direction. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's oral direction. Any such modifications are to be within the scope of the Action Memorandum, and are further subject to the dispute resolution procedures in Section XVI of this Order, should Respondents choose to initiate such procedures. Any other requirements of this Order may be modified in writing by mutual agreement of the Parties.

78. If Respondents seek permission to deviate from any approved work plan or schedule or the SOW, Respondents' Project Coordinator(s) shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondents may not proceed with the requested deviation until they receive oral or written approval from the OSC pursuant to Paragraph 77. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's oral direction.

79. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Order, or to comply with all requirements of this Order, unless it is formally modified.

XXVIII. NOTICE OF COMPLETION OF WORK

80. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, including payment of Future Response Costs, or record retention, EPA will provide written notice to Respondents. If EPA determines that any such Work has not been completed in accordance with this Order, EPA will so notify Respondents, provide a list of the deficiencies, and require that Respondents modify the Work Plan if appropriate in order to correct such deficiencies. Respondents shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondents to implement the approved modified Work Plan shall be a violation of this Order.

XXIX. SEVERABILITY/INTEGRATION/APPENDICES

81. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

82. This Order and its appendices constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Order. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Order. The following appendices are attached to and incorporated into this Order: the Work Plan (Appendix A), the Action Memorandum (Appendix B), and a map generally depicting the Site (Appendix C).

XXX. EFFECTIVE DATE

83. This Order shall be effective on the day it is issued by EPA. The undersigned representatives of Respondents certify that they are fully authorized to enter into the terms and conditions of this Order and to bind the party they represent to this Order.

It is so ORDERED and AGREED.

By: 

Chris Field, Unit Manager
Emergency Response Unit
Office of Environmental Cleanup
U.S. EPA, Region 10

Date: 12/1/10

For Respondent The Boeing Company

By: SL L Shastrey

Date Nov 9, 2010

For Respondent Jorgensen Forge Corporation

By: Steven M. Albrecht
President and CEO

Date 11/29/10

JORGENSEN FORGE OUTFALL REMOVAL ORDER ON CONSENT -- 29

ATTACHMENT D



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL
CLEANUP

MEMORANDUM

DATE: September 30, 2010

SUBJECT: Action Memorandum for the Jorgensen-Forge Outfall Site, Seattle, King County, Washington

FROM: Michael I. Sibley II, On-Scene Coordinator *MS*
Emergency Response Unit

THRU: Chris D. Field, Manager *CDF*
Emergency Response Unit

THRU: Sheila Eckman, Manager
Site Cleanup Unit Three

TO: Daniel D. Opalski, Director
Office of Environmental Cleanup

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the selected time-critical removal action described herein for the Jorgensen Forge Outfall Site ("Site"), Seattle, King County, Washington. The proposed time-critical removal action is expected to be conducted by potentially responsible parties, The Boeing Company ("Boeing") and Jorgensen Forge Corporation, in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") with oversight by the U.S. Environmental Protection Agency ("EPA").

This removal action consists of the cleaning and closure of existing 15- and 24-inch public lateral sewage discharge property line storm drain ("PLSD") pipes to remove and prevent polychlorinated biphenyls ("PCBs") and other hazardous substances from entering the Lower Duwamish Waterway ("LDW"). This removal action is intended to prevent continued discharge of stormwater through known PCB contamination to the LDW.

II. SITE CONDITIONS AND BACKGROUND

The CERCLIS ID is WAN0002329803 and the Site ID is 10JA.

USEPA SF



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The Jorgensen Forge Outfall Site consists of two outfall pipes, a 24-inch and adjacent 15-inch, buried just south of the current Jorgensen Forge facility's northern boundary with the adjacent Boeing Plant 2 facility (Figures 1 and 2). Both pipes discharged into the LDW. The LDW was listed on the National Priority List ("NPL") in September 2001 (CERCLIS No. WA0002329803). In 2002, the Washington Department of Ecology ("Ecology") added the LDW to the Hazardous Site List under Facility Site identification No. 42927743. EPA and Ecology jointly issued an Administrative Order on Consent ("AOC") pursuant to CERCLA and the Model Toxics Control Act ("MTCA") for a remedial investigation and feasibility study ("RI/FS") for the LDW Site on December 21, 2000 to Respondents Boeing, City of Seattle, Port of Seattle and King County. EPA and Ecology also agreed for their mutual convenience in a Memorandum of Understanding that EPA will generally be the lead agency for in-water portions of the LDW Site and Ecology will generally be the lead agency for upland source control, and that the Agencies may alter these lead-support roles at any time for any portions of the LDW Site.

On January 18, 1994, EPA issued a Resource Conservation and Recovery Act (RCRA) Section 3008(h) AOC to Boeing for a RCRA facility investigation/corrective measures study ("RFI/CMS") for its Plant 2 facility, including the implementation of Interim measures EPA may select. A RCRA RFI/CMS is generally equivalent to a CERCLA RI/FS. Under the 1994 AOC Boeing will address contaminated LDW sediments adjacent to Plant 2.

In 2003, EPA issued a CERCLA removal AOC to Earle M. Jorgensen Company, former owner/operator of the current Jorgensen facility, for the development of an Engineering Evaluation/Cost Analysis for a non-time critical removal action for LDW sediments adjacent to the Jorgensen facility. This AOC has been implemented by EMJ and the current owner/operator of the facility, Jorgensen Forge Corporation, collectively "Jorgensen." Jorgensen and Boeing have agreed in an amendment to each of their respective EPA AOCs, to coordinate their efforts, particularly with regarding the transitional area or "transition zone" between their respective contaminated sediment actions. The pipes that are the subject of this Action Memorandum were and are a source to these contaminated sediments. Jorgensen is also implementing an Ecology source control MTCA AOC. These pipes are generally within the geographical area covered by that MTCA AOC, but have by agreement between EPA and Ecology been scheduled for time-critical removal action by EPA pursuant to this Action Memorandum.

Historically, stormwater discharges by King County and the City of Tukwila have also been through the 24-inch pipe. In November 2008, Ecology issued Notice of Violation (NOV) Number 6180 to King County and the City of Tukwila for discharging stormwater through known PCB contamination to the LDW. These parties have since agreed to re-route their stormwater for discharges by other means.

The approximately 24-inch PLSD historically serviced a large portion of the drainage basin in the proximity of the Jorgensen facility, including at least portions of the Jorgensen and Plant 2 facilities, East Marginal Way South within the City of Seattle and the City of Tukwila, and the King County International Airport ("KCIA"), also known as Boeing Field. The 24-inch PLSD was installed in the late 1930s or early 1940s. 2005 sediment data from the 24-inch PLSD pipe revealed concentrations of polychlorinated biphenyls ("PCBs") up to 10,000 milligrams per kilogram (mg/kg).

Site Conditions

The 24-inch PLSD flows from east to west approximately parallel to the property line and 10 feet from the Boeing Plant 2 facility. The storm drain is approximately 24 inches in diameter and 1,200 feet in length as measured from the catch basin on the west side of East Marginal Way South to the LDW outfall. There are five catch basins (manholes) within the 24-inch PLSD. Historical connections feeding into the 24-inch PLSD consisted of a 15-inch drain from Plant 2 that entered along the east end and a 12-inch drain that entered along the west end from Jorgensen. On the north side of the 24-inch PLSD within the Jorgensen facility is an inactive 15-inch PLSD (described as a 12-inch PLSD in some reports) that historically received flow from Plant 2 (Ecology 2007b). Figures 2 and 3 illustrate the locations of the PLSDs (tables and figures are at the back of this document).

The 24-inch PLSD is constructed of concrete with the exception of approximately the last 100 feet at the west (outfall) end, which is corrugated metal. A video survey in 2005 observed that the outfall area had collapsed; however, flow continues to discharge into the LDW. The concrete portion of the drain contained cracks and deterioration, particularly at the joints (Ecology 2007b).

Background

Jorgensen Facility

The Jorgensen facility consists of approximately 21.6 acres. Isaacson Iron Works developed the site between 1940 and 1942 for the fabrication of structural steel, tractor, and road equipment. Site operations included forging, heat-treating, and cutting prefabricated steel rods (Ecology 2007b).

An embayment along the LDW in the west central area of the facility was filled between 1942 and 1946 (EPA 2003). Bethlehem Steel operated a distribution center in the western portion of the facility between 1953 and 1963.

The facility operated by Earle M. Jorgensen Company from 1965 to 1992. In 1992, the operation was purchased by a plant management group which formed the Jorgensen Forge Corporation.

Currently, manufacturing operations consist of forging carbon and low-alloy steels, duplex stainless grades, aluminum alloys, titanium alloys, and nickel-base alloys for commercial aircraft, aerospace, oil exploration, power generation, automotive, and shipbuilding industries. (Ecology 2007b).

Investigations pursuant to the 2003 AOC sampled subsurface soil, shoreline sediment, debris piles, and catch basins for metals and PCBs. The only suspected Jorgensen source of PCBs on site was in transformers; however, no evidence of a release was identified. (Ecology 2007b). The facility currently maintains four private stormwater outfalls located in the central and southern areas of the facility under an NPDES permit (PBS 2008). Historically, there were nine stormwater outfalls. In the mid 1980s, outfalls 5 through 9, located along the northern half of the property shoreline, were plugged. Outfall 4 is used infrequently and has remained inactive for several years between events; therefore, it was not considered a likely source of contaminants released to the LDW. The sample results of effluent from outfalls 1 through 3 indicated metals (chromium, copper, and zinc) at concentrations elevated above state standards.

In 2004, sample results of two debris piles located along the southern half of the facility shoreline indicated elevated metals and PCB concentrations. The PCB concentration from the north and south piles, respectively, were 2.34 mg/kg and 2.06 mg/kg, above the lowest apparent threshold of 0.13 mg/kg. Sampling of four of 19 catch basins detected 0.129 to 0.302 mg/kg PCBs. Due to the detection of contamination and accumulation of sediments in the storm drains, the catch basins were cleaned out following the sampling event (Farallon and Anchor 2006). Follow-up sampling of the catch basins in 2005 did not recover a sufficient quantity of storm solids for analysis; therefore, no sampling was conducted. It was concluded that implementation of best management practices (cleaning the catch basins) was effective and that storm solids observed during the sampling in 2004 had accumulated over several years.

In December 2009, Jorgensen completed a Draft Source Control Evaluation (SCER) Addendum Report. The purpose of the study was to fill data gaps identified by Ecology in the SCER report. The study included additional sampling of groundwater, soil, and storm drain solids analyzed for metals, total petroleum hydrocarbon ("TPH"), semivolatile organic compounds ("SVOCs"), volatile organic compounds ("VOCs"), as well as a video survey of storm drains (other than the PLSDs covered by this Memorandum). Only one monitoring well (MW6) located in the southwest area of the property was analyzed for PCBs to confirm 2003 sample results. PCB groundwater results were not detected above the laboratory practical quantitation limit of 0.000049 mg/kg. The video survey included outfalls 1 through 3 and historical drains leading to outfall 4 or 5. No connection was established between the surveyed drain and the Jorgensen 12-inch feeder line that connects to the 24-inch PLSD (Anchor 2009).

Boeing Plant 2

The Plant 2 facility has operated north of the Jorgensen facility since the 1930s, specializing in manufacturing aluminum alloy, steel alloy, and titanium alloy airplane parts. The facility encompasses approximately 109 acres. Currently, Plant 2 is shifting toward research and administration; however, historically, hazardous substances or constituents used or found on site included metals, PCBs, VOCs/SVOCs, TPH, and polycyclic aromatic hydrocarbons ("PAHs"). Corrective action under the 1994 RCRA 3008(h) AOC is ongoing to assess and correct releases of hazardous constituents detected in all media. Of eight administratively divided corrective action areas, two upland areas, area 2-66 and the South Yard Area, and the sediment area (Duwamish Sediment Other Area or "DSOA") border the Jorgensen facility; (Ecology 2007b).

Area 2-66

Area 2-66 includes 10 RCRA units; A Phase I investigation of the transformer pad analyzed 180 soil samples from 22 of 28 borings. The maximum PCB concentration detected was 660 mg/kg (sample SB-07221) from a depth of 6.5 to 8.0 feet bgs at a location between the transformer pad and the Boeing-Jorgensen property line. This sample depth is below the depth of the Boeing 15-inch PLSD that parallels the 24-inch PLSD. The step-out sample (SB-07220) results indicated PCBs at 0.22 mg/kg within 0 to 2 feet bgs and 0.132 mg/kg from a location 8 to 10 feet bgs less than 20 feet south of the 24-inch PLSD. TPH results indicated most samples were a mixture of a petroleum solvent and heavy oil. The area of PCB contamination extended below the depth of the 24-inch PLSD and south into the Jorgensen facility. Sample results at Plant 2 outfall 9 immediately north of the property line indicated migration of PCB contamination along the pipeline into the LDW. Migration of PCB contamination along the 24-inch PLSD line was neither eliminated nor definitively found a completed pathway because there were known connections (pipelines) between the transformer area and the 24-inch PLSD (Floyd Snider 2004). In spring 2004, four Seattle City Light transformers were removed from the Phase I study source area.

A Phase II study to fill data gaps in the Phase I study was completed in August 2005. It analyzed for PCBs and TPH in 96 subsurface soil, 8 groundwater, and 13 sediment samples from manholes in the stormwater systems, and determined that 1) the extent of PCB soil contamination decreased laterally with borings more than 80 feet; 2) PCBs were not detected at concentrations greater than 1 mg/kg (Floyd Snider 2005); and 3) PCB contamination from the transformer source area was entering the LDW along Plant 2 historical outfall 9 and its replacement 9A/Line Z. However, PCBs from the transformer area were not entering the 24-inch PLSD through either direct connections or subsurface cracks, so PCBs detected within the pipe were presumed from other sources (Floyd Snider 2005a).

The Phase II study also included sediment samples from the five storm drain manholes within the 24-inch PLSD and the two manholes within the inactive Boeing 15-inch PLSD. The most down-gradient storm drain manhole ("SDMH"-24A) within the 24-inch PLSD is approximately 100 feet up-gradient of the transformer pad. An inactive and plugged 12-inch feeder line originating from the Jorgensen facility is approximately 20 feet up-gradient of SDMH-24A. The most down-gradient manhole (SDMH-15A) within the 15-inch stormwater line is located approximately half the distance between SDMH-24A and the transformer pad (Floyd Snider 2005a). Total PCB results for samples collected from the 24-inch and 15-inch PLSDs (including lateral connections) are summarized in Table 1.

South Yard Area/Storm Drains

The South Yard area consists of approximately 13 acres and 18 RCRA units, of which 12 are stormwater management units. The soil and groundwater contaminants of concern (COCs) are VOCs, SVOCs, PCBs, and metals. Diesel hydrocarbons are a groundwater COC. PCB Aroclors 1254 and 1260 are COCs in soil; only 1260 is a groundwater COC. Groundwater flow direction along the Boeing-Jorgensen boundary is approximately parallel or slightly towards Jorgensen (Ecology 2007b). 24 stormwater outfalls drain roof and pavement runoff to the LDW. Tidal fluctuations partially or entirely inundate these drains. Historically, a portion of the South Yard drained to the 24-inch PLSD through a 15-inch feeder line (at location No. 37-7/SDMH11). Other portions drained to the Boeing 15-inch PLSD at SDMH15-B, and to the outfall 9/Z-line (Ecology 2007b, Anchor 2010).

A 2005 storm drain survey found up to 2.6 mg/kg total PCBs in the X line and 0.134 mg/kg in the Y line in addition to elevated concentrations of lead, chromium, and mercury (Floyd Snider 2005b) after which the X and Y lines were sealed with stormwater rerouted to the Z line. Subsequent sampling to determine the source of PCBs to the storm drains detected up to 40.5 mg/kg in floor caulking and sealants in building slabs and roadways within the drainage basin (Ecology 2007b).

The sealing of the Boeing 15-inch feeder line to the 24-inch PLSD is assumed to have occurred during the 2005–2006 storm line interim measure. This will be confirmed during this removal action.

City of Tukwila

In 1996, the City of Tukwila installed a stormwater collection system along East Marginal Way South to address street flooding. A total of 48 catch basins were installed along both sides of East Marginal Way South which discharged into an existing stormwater line which discharged to the 24-inch PLSD (PBS 2008).

In November 2008, Ecology issued a NOV to King County and the City of Tukwila for discharging stormwater through known PCB contamination to the LDW. At that time, the two governmental entities were the primary parties discharging through the 24-inch PLSD. The salient points in the responses of these local governments were that; 1) they had no control of pipes on private land, specifically no obligation to enforce against private pipe owners, especially in the absence of any current illicit discharge; 2) there is no evidence the governments discharged PCBs, the releases in issue occurred historically and remain in surrounding soil; 3) they have a legal right to discharge to a natural watercourse, including via piped drains; and 4) private property owners should be responsible for addressing their contaminating infrastructure, not local governments with public funds. The following month Tukwila initiated a PCB source control investigation of its stormwater system.

King County

Basin 5 of KCIA (Boeing Field), approximately 10.5 acres, discharges to the City of Tukwila stormwater system and into the 24-inch PLSD (Ecology 2007b). In January 2009, the County submitted a Basin 5 source control report for Ecology summarizing stormwater data for the years 1997-8, 2000-1, 2005, and 2008 (King 2009a). PCB concentrations are generally less than 50 mg/kg with one exception. See the preceding City of Tukwila section above.

Previous investigations of North Boeing Field ("NBF"), north and up-gradient of Basin 5, found high PCB concentrations up to 79,000 mg/kg (Landau 2007) believed to be from runway joint caulk. Materials that were identified at the time with PCB concentrations above 50 mg/kg were subsequently removed and replaced. NBF drains to Slip 4 (north of Plant 2). NBF and Slip 4 are being addressed by various EPA and Ecology AOCs.

In December 2009, King County completed stormwater system modifications to divert flow from Basin 5 to its Basin 2 outfall which is routed to a pump station and a series of tide gates and valves to prevent backflow from the LDW from entering the system. These modifications included plugging the outflow to the City of Tukwila stormwater system at manhole MH-1-E (catch basin CB584) and constructing a new manhole on the east side of Basin 5 to connect to the Basin 2 system (URS 2010).

A. Site Description

1. Removal site evaluation

PCB contamination in the 24-inch PLSD is due to historical releases. The Site is a very small portion of the LDW Superfund as noted above. No previous removal actions have involved the pipes that are the subject of this Action Memorandum.

The drainage basin for the 24-inch PLSD included a portion of Jorgensen and Plant 2 facilities, East Marginal Way South within the City of Seattle and the City of Tukwila, and the KCIA. Currently all historical drainage areas have been diverted elsewhere, except for approximately three acres of the adjacent street, East Marginal Way South within the City of Tukwila.

Several studies and remediation activities within the drainage basin for the 24-inch PLSD have been conducted since at least the early 1990s. The Jorgensen Forge and Boeing Plant 2 facilities have EPA identification numbers WAD000602813 and WAD009256819, respectively. Potential upgradient sources of contamination include EAA-4 include KCIA/Boeing and East Marginal Way South. Studies within the Plant 2 and Jorgensen facilities have detected contaminants in the sediment, soil, and groundwater with elevated PCB, TPH, VOC, SVOCs, or metals. In 2005 the 24-inch PLSD was sampled for PCB Aroclors and TPH. Previous studies have indicated elevated PCBs detected in LDW bank sediment adjacent to the Plant 2 and Jorgensen facilities. Upgradient PCB contamination has been detected in the caulking material within Plant 2 and KCIA and in storm drains within the Plant 2 and Jorgensen facilities; however, the highest concentrations appear to be located within the transformer release area along the Boeing-Jorgensen boundary.

2. Physical location

The Site is located along the northern boundary of the adjacent Jorgensen and Plant 2 facilities. The street address is 8531 East Marginal Way South, Seattle, Washington, 98108. The approximate location of the east end of the 24-inch PLSD is 47° 31'37.82" North Latitude; 122° 18'13.59" West Longitude (Figure 1).

The Site and surrounding area are primarily industrial. The nearest school (Concord Elementary) is approximately 0.75 miles west-southwest. The closest residences are within a mile are to the west in the South Park neighborhood across the LDW.

Annual meteorological averages at the Seattle-Tacoma Airport from 1931 to 2005 were: precipitation, 38.09 inches; temperature, 44.2–59.3° Fahrenheit (average minimum to average maximum); snowfall, 11.8 inches.

There are no known threatened or endangered species on the Site, nor are there any potential historical landmarks and/or structures with historical significance at the Site.

3. Site Characteristics

The Jorgensen facility maintains active manufacturing operations including forging carbon and low-alloy steels, duplex stainless grades, aluminum alloys, titanium

alloys, and nickel-base alloys for commercial aircraft, aerospace, oil exploration, power generation, automotive, and shipbuilding industries.

Boeing Plant 2 is also an active aircraft parts manufacturing, however it is currently, shifting toward research and administration. Historically, hazardous substances or constituents used on site included metals, PCBs, TPH, VOCs/SVOCs and PAHs.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

PCBs, the contaminant of concern, are hazardous substances as defined by section 101(14) of CERCLA, as amended, 42 U.S.C. section 9601(14). As discussed above, other hazardous substances, pollutants, or contaminants may also be on-site.

Numerous environmental investigations have documented the presence of PCBs in the PLSD pipes which discharge to the LDW. Total PCBs have been detected at concentrations as high as 10,000 mg/kg in a sample collected from the 24-inch PLSD. As indicated by the results in the Table 1, multiple samples exceed both the MTCA cleanup level for industrial soil (10 mg/kg) and EPA Regional Screening Levels for industrial soil and the protection of groundwater (0.74 and 0.0088 mg/kg, respectively, for Aroclor 1254). The locations of samples listed in Table 1 are indicated on Figure 3.

5. NPL Status

The Jorgensen-Forge Outfall Site is within the LDW Superfund Site which was listed on the National Priorities List (NPL) on 13 September 2001.

6. Maps, figures, and other graphic representations

Refer to attached Figures 1, 2, and 3 for the site location, layout, and an illustration of representative sample locations.

B. Other Actions to Date

1. Previous Actions

There have been no previous or currently ongoing response actions with respect to the pipes that are the subject of this Action Memorandum. All relevant previous or current response actions at surrounding facilities, including the Plant 2 and Jorgensen facilities, have been described above.

2. Current Actions

There are no government or private activities that are currently being performed at the Site.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

Ecology requested that EPA assist in the cleanup of the 24-inch line (Boeing proposed efficiently addressing the 15-inch line simultaneously). No first responder activities have occurred related to the 24-inch or 15-inch PLSD. EPA is the lead agency for this removal action, with support from Ecology. The EPA and Ecology joint lead and division of responsibilities for the LDW Site is fully described above.

2. Potential for continued State/Local Response

The continued administrative and regulatory support of state and local agencies is anticipated for this action. No state or local response action for these PLSD pipes is anticipated.

D. Tribal Interests

For the LDW Site, (including all early action and source control actions) within the LDW, EPA has initiated formal consultation with the Muckleshoot and Suquamish Tribes. Tribes have participated in document reviews, special meetings upon Tribal request, and frequent coordination meetings such as quarterly updates and project-specific briefings.

For this removal action, EPA has provided information to the Tribes at LDW quarterly meetings and has asked the Tribes if they have any concerns about the proposed removal action. Most recently, on August 17, 2010, EPA provided a project update to the Muckleshoot Tribe and Suquamish Tribe and neither Tribe expressed any environmental or cultural resource concerns related to the removal action for EPA to consider.

III. THREATS TO PUBLIC HEALTH WELFARE OR ENVIRONMENT

The current conditions at this Site meet the following factors which indicate that the Site is a threat to the public health or welfare or the environment, and a removal action is appropriate under § 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

A. Threat to Public Health or Welfare

1. Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)].

The elevated concentrations of PCBs found in solids and stormwater discharged from the PLSD pipes into the LDW pose a threat to human health and the environment. Stormwater and solids discharging from the PLSD pipes to the LDW contain PCB concentrations that exceed promulgated water quality and sediment criteria.

Human Health

After discharge to the LDW, PCBs are deposited on and in sediments in the LDW. Potential exposure pathways for human health risks include direct contact with PCB-contaminated sediments and ingestion of contaminated fish or shellfish. PCBs are a human carcinogen known to accumulate in the tissue of fish and shellfish. PCBs found in Plant 2 and Jorgensen sediments contribute to unacceptable risks to people throughout the LDW, as set forth in the LDW RI/FS.

Environment

Ecological receptors such as benthic organisms, fish, bird, and mammals may be exposed to PCBs through direct contact and/or incidental ingestion of PCB-contaminated sediments. The primary potential exposure pathway for fish, birds, and mammals is ingestion of marine organisms. Bottomfish may have additional exposure due to direct contact with or ingestion of contaminated sediment. PCBs are known to adversely affect aquatic biota. Sediments in the LDW have concentrations of PCBs that exceed Washington State Sediment Management Standards (SMS) numerical criteria for the protection of benthic invertebrate organisms.

2. Actual or potential contamination of drinking water supplies or sensitive ecosystems [300.415(b)(2)(ii)].

The LDW is a sensitive estuarian ecosystem in which salmonids listed as endangered species live as juveniles, along with the full complement of wildlife typical of such systems in urban areas of the Pacific Northwest. Discharges from the PLSD pipes are a source of contamination to the LDW.

3. Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [300.415(b)(2)(v)].

PCBs may migrate from the 24-inch PLSD during precipitation events. Tidal fluctuations that move up into and out of the 24-inch PLSD may continue to cause contaminants to migrate to or from the LDW.

4. The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)].

The proposed time-critical removal action is expected to be conducted by potentially responsible parties pursuant to an EPA Order pursuant to section 106 of CERCLA. There are no known other appropriate federal or state response mechanisms capable of providing the appropriate resources in the prompt manner needed to address the potential human health and ecological risks associated with the PLSD pipes described herein.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

Based on the analysis of the nature and extent of Site contamination, the following time-critical removal action is proposed to address the public health, welfare, and the environmental threats discussed in Section III of this Action Memorandum.

A. Proposed Actions

1. Proposed Action Description

The proposed removal action will eliminate stormwater discharges from the PLSD 15- and 24-inch pipelines (hereinafter collectively referred to as the "Pipelines") to the LDW. It is anticipated that the proposed removal action shall be conducted in accordance with EPA-approved work plans and design documents.

For purposes of this removal action, EPA considered the following alternatives for the 24-inch pipe (the 15-inch pipe would be removed in any case):

1. Clean, close, and seal the pipe in place with ash-fill or other inert material, and re-route the stormwater to another outflow location off site;
2. Clean and repair the pipe in situ; or
3. Excavate the pipe and install a new line at the same location.

The City of Tukwila is currently the only known entity actively using the 24-inch PLSD for stormwater discharge (only 3% of its stormwater). The first option requires the city to redirect its stormwater discharge to another outfall location and the city has agreed to do so.

The nearest down-gradient location is a 48-inch outfall through the Boeing (formerly Isaacson Iron Works) property south of the Jorgensen facility. The 48-inch drain crosses East Marginal Way South approximately 1,000 feet south of the 24-inch PLSD. The estimated cost to clean and fill/close the 24-inch PLSD in place is \$50,000 to \$80,000.

The second option of cleaning and repairing the 24-inch PLSD in situ would allow the existing stormwater flow to continue in its current route with limited disruption to surface facility operations. In situ repairs may be completed by a trenchless technology that includes (1) assessing the current condition of the pipe with a video survey, (2) cleaning the pipe with a sewer jet, and (3) re-lining the pipe with a material that forms in place and seals the existing pipe.

This option would require vacuum trucks to remove material (roots, sediment, and/or water) from the pipe during the cleaning process which may contain contaminants that require special handling and disposal, and repairing the collapsed outfall area prior to re-lining the pipe to eliminate infiltration of potential contaminants in the soil or groundwater surrounding the collapsed area. Lastly, a trap at the outfall may be necessary to eliminate or reduce inflow of tidal water and suspended sediment which may contain contaminants from the LDW. Total costs are estimated at \$200,000 to \$220,000.

The third option would excavate the 24-inch PLSD and replace it with a new stormwater pipe. Soil surrounding the pipes would be replaced with clean fill. The estimated cost is \$800,000 to \$1,000,000.

Given that the City of Tukwila will divert its stormwater from the 24-inch PLSD, the two significantly more expensive but no more protective alternatives may be eliminated.

The proposed removal action consists primarily of locating the underground PLSD pipes, removing the overburden to expose them and accessible lateral connections, flushing the pipes to remove any residual water and solids contained within the lines, and *in situ* sealing and closure of the pipes.

The proposed work activities will be conducted within the Boeing 15-inch and directly adjacent 24-inch pipes that transit the northern portion of the Jorgensen facility. The work will be limited to the concrete portion of the pipes which extend from the upgradient Jorgensen eastern property line to the downgradient intersection of the concrete-corrugated metal pipe ("CMP") connections in the pipes near the Jorgensen western property line.

The work area will be enclosed by temporary fencing, and advisories will be placed on the fencing to alert and educate people about the cleanup activity.

Prior to opening an excavation, the PLSD 15- and 24-inch pipes will be located to identify any underground installations that may reasonably be expected to be encountered during the excavation work. Additionally, all surface encumbrances that are located so as to create a hazard to employees will be identified and removed, as appropriate.

Material overlying the buried pipes will be excavated and set aside to be reused as backfill and will be placed to avoid contamination of clean surfaces. The pipes and accessible laterals will be cleaned out, and this activity will be conducted to ensure any wash water and/or residual solids are contained thus avoiding an uncontrolled release to the environment. A reconnaissance will be conducted to ensure that water and residual solids have been removed from within the cleaned portions of the pipes. The pipes will be permanently sealed and then reburied. .

All wastes, including wastewater and pipe residuals, will be analyzed to determine the appropriate packaging, labeling, transportation, and disposal. Best Management Practices ("BMPs") will be implemented during construction to protect workers, the community, and the environment from short-term construction impacts such as erosion, sedimentation, fugitive dust, and other similar potential impacts. Ecology will be responsible for post-removal site controls.

2. Contribution to remedial performance

The proposed action will, to the extent practicable, contribute to the efficient performance of any long-term remedial action for the LDW.

3. Applicable or relevant and appropriate requirements (ARARs)

The NCP requires that removal actions attain Applicable or Relevant and Appropriate Requirements (ARARs) under federal or more stringent state environment or facility siting laws, to the extent practicable. (40 CFR § 300.415[j]) In determining whether compliance with ARARs is practicable, EPA may consider the scope of the removal action and the urgency of the situation. (40 CFR § 300.415[j]) The scope of the removal action proposed in this Action Memorandum is limited.

Toxic Substances Control Act (TSCA) Regulations [40 CFR 761]. These regulations are applicable to solids in the storm drain system and stormwater that contain PCBs. All solids with PCBs at a concentration equal to or greater than 50 ppm must be incinerated in an approved incinerator or disposed of in a State or federally authorized hazardous or dangerous waste landfill, and those solids with PCBs of a concentration less than 50 ppm may be disposed in a municipal solid waste or non-hazardous waste landfill.

Washington State Hazardous Waste Management Act and Dangerous Waste Regulations [RCW 70.105; Chapter 173-303 WAC]. These regulations govern the handling and disposition of dangerous waste, including identification, accumulation, storage, transport, treatment, and disposal. They are potentially applicable to generating, handling, and managing dangerous waste at the Site, and would be potentially relevant and appropriate even if dangerous wastes are not managed during remediation.

Washington State Solid Waste Handling Standards [RCW 70.95; Chapter 173-350 WAC]. These standards apply to facilities and activities that manage solid waste. The regulations set minimum functional performance standards for proper handling and disposal of solid waste; describe responsibilities of various entities; and stipulate requirements for solid waste handling facility location, design, construction, operation, and closure. These regulation are also potentially applicable or relevant and appropriate for management of excavated soil or debris that will be generated during the Site cleanup.

Washington Clean Air Act and Implementing Regulations [WAC 173-400-040(8)]. This regulation is potentially relevant and appropriate to response actions at the Site. It requires the owner or operator of a source of fugitive dust to take reasonable precautions to prevent fugitive dust from becoming airborne and to maintain and operate the source to minimize emissions.

General Regulations for Air Pollution Sources - Washington State [RCW 70.94; Chapter 173-400 WAC]. These regulations establish standards and rules applicable to the control and/or prevention of the emission of air contaminants. Depending on the response action selected, these regulations are potentially applicable to the Site (e.g., generation of fugitive dust during soil excavation).

4. Project Schedule

The project is expected to take one week to complete. It is presently anticipated that this work will be performed by potentially responsible parties with EPA oversight during the 2010 construction season.

B. Estimated Costs

The estimated oversight costs for removal action are \pm \$50,000. EPA estimated costs per this Action memorandum are anticipated only for costs associated work performed by responsible parties based in significant part on discussions with such parties. If EPA were to undertake implementation of the work described in this Action Memorandum, with its own resources, an Action Memorandum Amendment and cost Ceiling Increase would likely be required.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the proposed removal action should be delayed or not taken, hazardous substances will remain as potential human health and ecological threats as a continuing source of contaminants to the LDW. Remediation of contaminated sediment in affected areas of the LDW could not proceed.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

See the attached "Confidential Enforcement Addendum" for enforcement details.


IX. RECOMMENDATION

This decision document represents the selected removal action for the Jorgensen-Forge Outfall Site, developed in accordance with CERCLA as amended, and is consistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at this Site meet the NCP section 300.415(b)(2) criteria for a removal action and I recommend your approval of the proposed removal action.

X. APPROVAL / DISAPPROVAL

X Approval


Daniel D. Opalski, Director
Office of Environmental Cleanup

9/30/2010
Date

_____ Disapproval

Daniel D. Opalski, Director
Office of Environmental Cleanup

Date

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Jorgensen Forge/Boeing Action Memo

Data Table

Table 1: Summary of Total PCB Results for 24-Inch and 15-inch PLSDs

Sample Locations	Sample Date	Results (mg/kg)				
		Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs
MTCA Cleanup Level for Industrial Soil (Total PCBs)	--	--	--	--	--	10
Regional Screening Levels for Industrial Soil	--	0.74	0.74	0.74	0.74	--
Soil Screening Level for Protection of Groundwater	--	0.0053	0.0052	0.0088	0.024	--
24-inch PLSD Sample Results East to West						
SD MH11(SD006)	6/3/2005	0.96 U	0.96 U	68	0.96 U	68
No.37-2, SDMH11 (SD001)	6/3/2005	256 U	770 U	2,600	256 U	2,600
No. 37-7, SDMH11 (SD002) (Boeing 15-inch feeder pipe)	5/3/2005	86.2 U	86.2 U	730	86.2 U	730
SD MH24B (SD004)	5/3/2005	323 U	323 U	2,400	323 U	2,400
SD MH24A (SD005)	5/3/2005	1,400 U	1,400 U	10,000	1,400 U	10,000
Boeing 15-inch PLSD East to West						
SD MH 15B (SD003)	5/3/2005	16.7 U	16.7 U	140	16.7 U	140
SD MH 15A (CB010 Composite)	4/8/2005	8 U	39	40	8 U	79
SD MH 15A (CB011 Top 9")	4/8/2005	0.64 U	3.4	3.0	0.8	7.2
SD MH 15A (CB012 Bottom 3")	4/8/2005	24 U	120	230	47 UY	350
Jorgensen Forge 12-inch Feeder Pipe						
12SD-070105-01 (at tie-in)	7/1/2005	1.6 U	1.6 U	1,100	1.6 U	1,100
12SD-070105-02 (40 feet up from tie-in)	7/1/2005	1.6 U	1.6 U	6.5	1.6 U	6.5

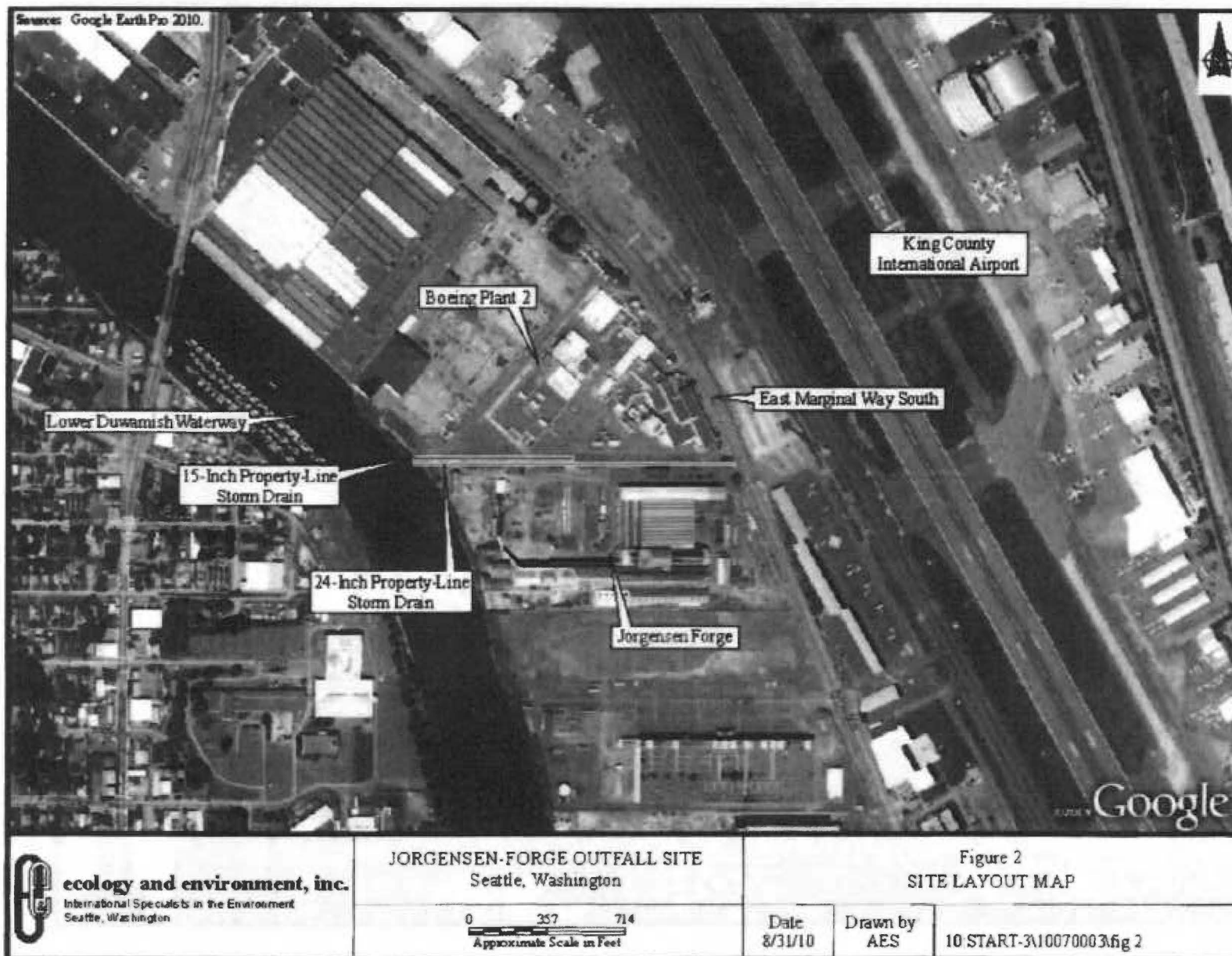
Source: Floyd Snider 2005a; Farallon and Anchor 2006

Key:

- = not available / not applicable
- mg/kg = milligrams per kilogram
- MTCA = Washington State Department of Ecology Model Toxics Control Act
- PCBs = polychlorinated biphenyls
- PLSD = property line storm drain
- U = no detected concentration above the listed laboratory reporting limit
- Y = Analyte reporting limit is raised due to a positive chromatographic interference;
the compound is not detected above the raised limit but may be present at or below the limit.

Jorgensen Forge/Boeing Action Memo

Figures





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL
CLEANUP

SUBJECT: Corrections to the Amendment to the Action Memorandum for the Removal Action at the Jorgensen Forge Outfall Site, Lower Duwamish Waterway Superfund Site, Seattle, King County, Washington

FROM: Ravi Sanga, Remedial Project Manager
Superfund Site Cleanup Unit #3 *RS*

THRU: Shawn Blocker, Unit Manager *SNB*
Superfund Site Cleanup Unit #3

TO: *for* Chris D. Field, Program Manager *WLA*
Emergency Management Program

The following corrections to this Amendment to the Action Memorandum are requested in order to accurately capture the scope of response for the time-critical removal action at the Jorgensen Forge Outfall Early Action Area, Lower Duwamish Waterway Superfund Site ("LDW"), Seattle, King County, Washington ("Site").

Correction 1 - Depth of excavation will be max 32 feet below ground surface unless EPA determines based on post excavation sampling data and other information that additional soil removal is necessary.

Correction 2 - Removal of PCBs above 1 ppm will make it unnecessary to conduct long-term maintenance and monitoring.

Conditions at the Site continue to meet the NCP criteria, 40 C.F.R. § 300.415(b), for a removal action and I recommend your approval with the corrections of the proposed removal action as proposed above. The proposed removal action is still expected to be conducted by Boeing and Jorgenson Forge, with oversight provided by the EPA. However, if these PRPs are unwilling or unable to conduct the proposed removal action, and the EPA must do so, the total project ceiling is estimated to be \$1.7 to \$1.9 million.

APPROVAL/DISAPPROVAL

Approval

for *W. D. Field*
Chris D. Field, Program Manager
Emergency Management Program

6/24/15
Date

Disapproval

Chris D. Field, Program Manager
Emergency Management Program

Date

ATTACHMENT E

Jorgensen Forge Outfall Site

Third Modification to the Administrative Order on Consent for Removal Action

A. This Third Modification ("Third Modification") to the Administrative Order on Consent for Removal Action ("Order") at the Jorgensen Forge Outfall Site ("Site"), CERCLA Docket No. 10-2011-0017, provides for the performance of the following additional Work by mutual agreement of the Parties in accordance with Paragraph 77 in Section XXVII (Modifications) of the Order. The United States Environmental Protection Agency ("EPA") has determined that this additional Work is necessary for the Site, and has set forth this determination in the Amendment to the Action Memorandum for the Jorgensen-Forge Outfall Site, Tukwila, King County, Washington, dated March 17, 2015, which includes the Correction thereto issued by EPA on June 24, 2015 (together referred to as the "Amendment"). The Amendment is attached as Appendix D to this Third Modification. In the event of any conflict between this Third Modification and the Amendment, this Third Modification shall control. Respondents shall perform all actions necessary to implement the Amendment in accordance with the Corrugated Metal Pipe Work Plan ("CMP Work Plan") developed under this Third Modification.

B. Respondents shall excavate and properly dispose of the corrugated metal segments of the Site stormwater drainage pipes, and soils in the vicinity of these corrugated metal segments, in accordance with the EPA-approved CMP Work Plan. The areas to be excavated are depicted on Figure 1 (hereinafter referred to as the "Corrugated Metal Pipe ("CMP") Work"), which is attached to and made a part of this Third Modification. The CMP Work Area is defined by the northwestern corner of the Jorgensen Forge Corporation ("Jorgensen Forge") property and southwestern corner of The Boeing Company ("Boeing") Plant 2 property extending landward of the sheet-pile wall that was installed under the Second Modification (and that remains in place, demarcating the top of the shoreline bank) to the union between the CMP and now abandoned clay pipe segments. Sampling and analysis in this area conducted during implementation of the Order and First Modification identified the location of the CMP and polychlorinated biphenyls ("PCBs") in sufficient detail to design, plan, and perform the CMP Work. The objective for this aspect of the Work shall be to excavate PCB-contaminated soil within the sheetpiled portion of the CMP Work Area to a maximum depth of 32 feet below ground surface (bgs) (i.e., elevation - 16 NAVD 88), which depth (or elevation) has been shown by sampling to contain PCBs with a concentration of greater than one part per million (ppm). The excavation depths for particular locations within the sheetpiled portion of the CMP Work Area will be delineated in the CMP Work Plan, with final depth determinations to be made by EPA. Following the removal of soil, the objectives shall be the performance of verification sampling at the bottom of the excavation, and the excavation of any remaining material found to contain PCBs above one ppm. The wing wall and top-of-bank sheet-pile, depicted in Figure 1, will function to separate the CMP Work Area from the shoreline bank area to the south and the waterway bank to the west, respectively, which are subject to the Administrative Settlement Agreement and Order on Consent for Removal Action Implementation, CERCLA Docket No. 10-2013-0032, entered into between EPA and Earle M. Jorgensen Company.

C. The CMP Work pursuant to this Third Modification shall be performed in accordance with the terms and conditions of the Order and the EPA-approved CMP Work Plan which shall include, at a minimum, the following elements:

1. All soils excavated from a depth of 0-7 feet below ground surface ("bgs") (i.e., from ground surface to above the top elevation of the CMP) shall be excavated and disposed of in a Subtitle D landfill. All soils excavated at and below the depth of the CMP shall be disposed of in a Subtitle C landfill.
2. After removal of soils from the CMP Work Area, confirmation samples shall be taken to confirm that the objectives of this Third Modification and the CMP Work Plan have been achieved to EPA's satisfaction prior to backfill.
3. As part of the CMP Work, Respondents may install sheetpiles as depicted in Figure 1. So long as the removal of some or all of these sheetpiles at the conclusion of the CMP Work would not cause a threat from hazardous substances, including PCBs, to public health or the environment, Respondents shall have the discretion to remove these sheetpiles.
4. Respondents shall submit the CMP Work Plan, including a proposed schedule for completing the CMP Work, along with a Health and Safety Plan, within 45 days of the effective date of this Third Modification. The CMP Work Plan shall include sub-plans such as a Quality Assurance Project Plan, Sampling and Analysis Plan, and Site Management Plan. If appropriate, already approved sub-plans may be incorporated into the CMP Work Plan. The CMP Work Plan shall be subject to approval by EPA in accordance with Paragraph 15.b (Work Plan and Implementation) in Section VIII (Work to be Performed) of the Order. Upon approval, or approval with modifications, the CMP Work Plan, the associated schedule, and any subsequent modifications thereto shall be incorporated into and become fully enforceable under this Third Modification and the Order. Respondents shall incorporate all changes to the Health and Safety Plan recommended by EPA, and shall implement the Health and Safety Plan during the pendency of the CMP Work.
5. The CMP Work Plan shall:
 - a. Summarize the CMP Work boundaries pertinent to the activities to be completed under this Third Modification;
 - b. Summarize past data that characterize the nature and extent of the CMP and PCB contamination in the vicinity of the CMP;
 - c. Summarize the excavation volumes for soils;

- d. Summarize the actions and objectives to be completed under this Third Modification;
 - e. Describe the means and methods for the excavation and proper disposal of the CMP and soils and treatment of waste water;
 - f. Identify performance criteria, consistent with Paragraph B above, by which successful completion of the CMP Work to be completed under this Third Modification will be evaluated;
 - g. Identify the anticipated key CMP Work schedule milestone dates;
 - h. Describe the project organization, responsibilities, and lead personnel qualifications; and
 - i. Describe post-excavation site restoration.
6. Within 60 days following completion of all field work required under this Third Modification, Respondents shall submit for EPA review and approval a CMP Work Final Report summarizing the actions taken to comply with this Third Modification. The CMP Work Final Report shall be in accordance with Paragraph 20 (Final Report) in Section VIII (Work to be Performed) of the Order.

D. Timely and adequate submission of both the CMP Work Plan and CMP Work Final Report shall be additional Compliance Milestones pursuant to Paragraph 47.b (Stipulated Penalty Amounts – Work) in Section XVIII (Stipulated Penalties) of the Order. No further financial assurances pursuant to Section XXVI (Financial Assurance) of the Order shall be required for the CMP Work. The completion of the CMP Work shall be subject to Section XXVIII (Notice of Completion of Work) of the Order. This Third Modification shall be effective on the date it is executed by EPA.

E. “Past Response Costs” shall mean all costs incurred by EPA before June 1, 2010, for the Site that are not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”) and that include, but are not limited to, direct and indirect costs. Within 30 days of receipt of a bill and certified cost summary for Past Response Costs, Respondents shall pay the billed amount of Past Response Costs to EPA. Respondents shall make the payment of Past Response Costs by Fedwire Electronic Funds Transfer (EFT) to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York, NY 10045
"Beneficiary: U.S. Environmental Protection Agency"

F. The payment of Past Response Costs shall reference "Site/Spill ID Number 10JA" and "CERCLA Docket No. 10-2011-0017. As an alternative to an EFT payment, Respondents shall make payment of Past Response Costs by official bank check made payable to "EPA Hazardous Substance Superfund." The check, or a letter accompanying the check, shall identify the name and address of the party making payment, shall reference the "Jorgensen Forge Outfall Site, Site/Spill ID Number 10JA," and "CERCLA Docket No. 10-2011-00017," and shall be sent to:

U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St. Louis, MO 63197-9000

G. The total amount of Past Response Costs to be paid by Respondents shall be deposited by EPA into the Lower Duwamish Waterway Special Account to be retained and used to conduct or finance response actions at or in connection with the Lower Duwamish Waterway Superfund Site, or to be transferred by EPA to the Hazardous Substance Superfund. At the time of payment of Past Response Costs, Respondents shall send an electronic notification that payment has been made to Ravi Sanga, EPA Remedial Project Manager, at sanga.ravi@epa.gov, and to the EPA Cincinnati Finance Center (CFC) by electronic or postal service mail at:

EPA CFC by email: cinwd_acctsreceivable@epa.gov

EPA CFC by regular mail: EPA Cincinnati Finance Center
26 W. Martin Luther King Drive
Cincinnati, Ohio 45268

The notices to Mr. Sanga and CFC shall reference "Site/Spill ID Number 10JA" and Docket No. 10-2011-0017.

H. In the event that payment for Past Response Costs is not made within 30 days of receipt of a bill and certified cost summary, Respondents shall pay Interest on the unpaid balance. The Interest on Past Response Costs shall begin to accrue on the effective date of this Third Modification and shall continue to accrue until the date of payment. Payment of such Interest shall be in addition to other remedies or sanctions available to the United States by virtue of

Respondent's failure to make timely payment of Past Response Costs, including but not limited to, payment of stipulated penalties pursuant to Section XVIII of the Order.

I. The term "Past Response Costs" is hereby added to the following provisions in the Order:

1. the first sentence of Paragraph 41 in Section XVI (Dispute Resolution);
2. the first and second sentences of Paragraph 56 in Section XIX (Covenant not to Sue by EPA);
3. Paragraph 58.b in Section XX (Reservation of Rights by EPA);
4. the first sentence of Paragraph 60 in Section XXI (Covenant not to Sue by Respondents);
5. the second sentence of Paragraph 68 in Section XXII (Contribution Protection); and
6. the first sentence of Paragraph 80 in Section XXVIII (Notice of Completion of Work).

J. The effective date of this Third Modification shall be the date it is signed by EPA following signatures by Respondents.

By:



Date:

30 JUNE 2015

Rm

Chris Field, ~~Unit Manager~~ Program Manager
Emergency ~~Response Unit~~ Management Program
Office of Environmental Cleanup
U.S. EPA, Region 10

For Respondent The Boeing Company:

By:

Date:

For Respondent Jorgensen Forge Corporation:

By:

Date:

Respondent's failure to make timely payment of Past Response Costs, including but not limited to, payment of stipulated penalties pursuant to Section XVIII of the Order.

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6. the first sentence of Paragraph 80 in Section XXVIII (Notice of Completion of Work).

J. The effective date of this Third Modification shall be the date it is signed by EPA following signatures by Respondents.

By:

Date:

pm *D.*
Chris Field, ~~Unit Manager~~ Program Manager
Emergency Response Unit Management Program
Office of Environmental Cleanup
U.S. EPA, Region 10

For Respondent The Boeing Company:

By:

Date:

For Respondent Jorgensen Forge Corporation:

By:

Date: 6-26-2015

G.M. Jewell
President / CEO

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6. the first sentence of Paragraph 80 in Section XXVIII (Notice of Completion of Work).

J. The effective date of this Third Modification shall be the date it is signed by EPA following signatures by Respondents.

By:

Date:

Rm *D.*
Chris Field, ~~Unit Manager~~ *Program Manager*
Emergency ~~Response Unit~~ *Management Program*
Office of Environmental Cleanup
U.S. EPA, Region 10

For Respondent The Boeing Company:

By:

SL & Shastay

Date:

June 25 2015

For Respondent Jorgensen Forge Corporation:

By:

Date:

ATTACHMENT F



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL
CLEANUP

August 29, 2016

Mr. Miles Dyer
Acting Director, Environmental Compliance
Senior Staff Environmental Engineer
Jorgensen Forge Corporation
8531 E. Marginal Way S
Tukwila, Washington 98108

Mr. Will Ernst
EO&T EHS Remediation
The Boeing Company
PO Box 3707 M/C 1W-12
Seattle, Washington 98124

Re: EPA Approval – Schedule Extension Request, CMP Removal Phase 2 - Shored
Excavation, Jorgensen Forge Outfall Site, Lower Duwamish Waterway Superfund Site, Seattle,
Washington

Dear Mr. Dyer and Mr. Ernst:

The US Environmental Protection Agency (EPA) has reviewed the Schedule Extension Request submitted by The Jorgensen Forge Corporation (Jorgensen) and The Boeing Company (Boeing) on August 22, 2016 for the JFOS CMP Removal Action, being conducted as part of the Third Modification to the Administrative Order on Consent for Removal Action (Order), CERCLA Dkt. No. 10-2011-0017.

EPA is approving the Schedule extension request. The JFOS CMP Removal Action required by the Order must be completed in 2017. EPA would also like to remind Boeing and Jorgensen that they are required to perform this removal action pursuant to the terms of the Order.

As part of the schedule modification, EPA is requiring that by March 1, 2017 a proposed start date for the JFOS CMP Removal Action be provided to the EPA along with a proposed work schedule that includes the pre-construction meeting that will be required before a notice to proceed for the Removal Action from EPA will be given. EPA expects that all contracting issues will also have been resolved by both parties. In addition, a revised Construction Work Plan that addresses all of EPA's comments must be submitted within 15 days of receipt of those comments. The above obligations are requirements of the Order.

Should you have any questions I can be contacted at sanga.ravi@epa.gov or 206-553-4092. Inquiries of a legal nature need to be addressed to Richard Mednick at mednick.richard@epa.gov or 206-553-1797.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ravi Sanga", with a stylized flourish at the end.

Ravi Sanga
Remedial Project Manager
Site Cleanup Unit 3
Office of Environmental Cleanup

cc:

Tom Colligan
Floyd Snider

Dan Balbiani
PES Environmental

ATTACHMENT G

ESCROW AGREEMENT

THIS ESCROW AGREEMENT (this "Agreement") is entered into as of November __, 2016, by and among CE Star Holding, LLC, a Delaware Limited Liability Company, the prospective purchaser of the property located at 8531 East Marginal Way South, Seattle, WA ("Purchaser"), the United States, by the United States Department of Justice ("United States" or "DOJ"); and XXX Bank ("Escrow Holder") (Purchaser and United States jointly, the "Parties") and for the benefit of parties who, on or before June 1, 2020, have entered into a settlement with EPA to perform remedial design and/or remedial action for the Lower Duwamish Waterway and have been identified by the settlement(s) as authorized to receive disbursement from the Escrow Holder ("Authorized Parties" or "Beneficiaries").

RECITALS

WHEREAS, Purchaser intends to buy the property located at 8531 East Marginal Way South, Seattle, WA (the "Property") from the Jorgensen Forge Corporation. ("Seller") pursuant to that certain Asset Purchase Agreement dated July 14, 2016;

WHEREAS, The Parties have entered into a Settlement Agreement and Order on Consent for a Removal Action by Bona Fide Prospective Purchaser ("Settlement Agreement") in connection with the Property. The Settlement Agreement requires Purchaser, within 30 days of the Effective Date of the Settlement Agreement, to deposit \$500,000 into an interest-bearing escrow account (the "Escrow Account") with Escrow Holder; and

WHEREAS, The Parties desire that Escrow Holder receive, hold and disburse the funds in the Escrow Account in accordance with the terms, conditions and provisions of this Agreement, and Escrow Holder is willing to do so, the Parties and Escrow Holder agree as follows:

AGREEMENT

1. Appointment of Escrow Holder. Escrow Holder shall be appointed by Purchaser, subject to approval by the United States, and serve as the escrow agent to receive, hold and disburse the funds in the Escrow Account in accordance with the terms and conditions hereof.

2. Acceptance by Escrow Holder. Subject to the terms and conditions contained herein, Escrow Holder agrees to hold and disburse the funds in the Escrow Account pursuant to this Agreement. Any reasonable charges and costs incurred by Escrow Holder for establishing and maintaining the escrow established hereby shall be paid by Purchaser.

3. Purpose of the Escrow Account. The exclusive purposes of the Escrow Account are to (a) receive payment of \$500,000 from Purchaser; (b) earn interest thereon; and (c) disburse the funds to Authorized Parties to be used by such parties to fund performance of remedial

design and/or remedial action activities pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 – 9675 (“CERCLA”) and in connection to the Lower Duwamish Waterway Superfund Site, or as otherwise provided in Paragraph 6.

4. Investment of Escrow Account. The funds held in the Escrow Account shall be invested in such instruments that will generate non-taxable interest on funds. To the greatest extent possible the investment instruments shall (a) provide such liquidity as will permit immediate distribution of the funds; (b) provide a guaranteed rate of return sufficient to cover all expenses and fees of the Escrow Account without reduction of principal; and (c) protect against loss of the principal of the payment amount deposited in this Escrow Account.

5. Interest on Funds. Interest on the funds deposited shall accrue and be added to the principal amount to be distributed in accordance with the provision of the Settlement Agreement and the Agreement.

6. Distribution of Funds. To obtain funds from the Escrow Account, the Authorized Parties shall submit to the Escrow Holder and to the United States Department of Justice a copy of the relevant settlement(s) and a Certification attesting to the response costs incurred to date and a summary itemization of those costs. The United States may, in its discretion, request supporting documentation of the claimed costs. The United States will notify Escrow Holder and the Authorized Parties of its approval or disapproval the Certification(s) and Escrow Agent shall disburse funds in the amounts approved by the United States. In the event that funds remain unclaimed in the Escrow Account after September 1, 2021, the Escrow Holder shall disburse the remaining funds as instructed by the United States.

7. Certain Rights, Duties, Liabilities, Privileges and Immunities of Escrow Holder. The Parties agree that the following provisions shall control with respect to the rights, duties, liabilities, privileges and immunities of Escrow Holder.

(a) In the event of any disagreement between any of the parties to this Agreement, or between them or any of them or any other person or entity resulting in adverse claims or demands being made in connection with the subject matter of the escrow established hereunder, or in the event that Escrow Holder, in good faith, is in doubt as to what action it should take hereunder, Escrow Holder may, at its option, refuse to comply with any claims or demands on it, or refuse to take any other action hereunder, so long as such disagreement continues or such doubt exists, and, in any such event, Escrow Holder shall not be or become liable in any way or to any person or entity for its failure or refusal to act, and Escrow Holder shall be entitled to continue to refrain from action until all differences shall have been adjusted and all doubt resolved by agreement among all of the interested persons or entities, and Escrow Holder shall have been notified thereof in writing signed by all such persons or entities; Escrow Holder shall not offset, withhold from disbursement, or otherwise seek to use any of the funds in the Escrow Account for its own benefit, whether or not a debt is owed to Escrow Holder by any party hereto.

8. Notices. All notices and other communications hereunder shall be provided by either personal delivery or email transmission at the addresses set forth below, with a courtesy

copy to the U.S. Environmental Protection Agency at the address below, (or at such other address as a party or EPA may hereafter designate for itself by notice to the other parties as required hereby):

To Purchaser: CE Star Holding, LLC
c/o GoldenTree Asset Management LP
300 Park Avenue, 20th Floor
New York, NY 10022
Attn: Daniel E. Flores

To US Dept of Justice: Fred Phillips
Environmental Enforcement Section
U.S. Dept of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Email: Frederick.phillips@usdoj.gov

To EPA: Ted Yackulic
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101
Email: yackulic.ted@epa.gov

If to Escrow Holder:

Any notice or authorization delivered to Escrow Holder by Purchaser or any Authorized Party shall concurrently be delivered to DOJ and EPA in accordance with the foregoing. Any notice or authorization delivered to Escrow Holder by DOJ or EPA shall concurrently be delivered to Purchaser and any Authorized Party in accordance with the foregoing.

9. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and the beneficiary hereof and their respective heirs, legal representatives, successors and assigns.

10. Counterparts. This Agreement may be executed in a number of identical counterparts, each of which for all purposes is to be deemed an original, and all of which constitute, collectively, one agreement. An electronic copy of a party's signature is valid and binding to the same extent as an original signature.

11. Governing Law. This Agreement shall be governed by, interpreted under, and construed and enforced in accordance with the laws of the State of Washington.

[Signatures begin on the following page.]

IN WITNESS WHEREOF, the parties have executed and delivered this Agreement as of the date first above written.

UNITED STATES DEPARTMENT OF JUSTICE:

DATE

PURCHASER:

DATE

ESCROW HOLDER:

DATE